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PENNSYLVANIA GAME NEWS

PRIL 1940

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PENNSYLVANIA GAME NEWS

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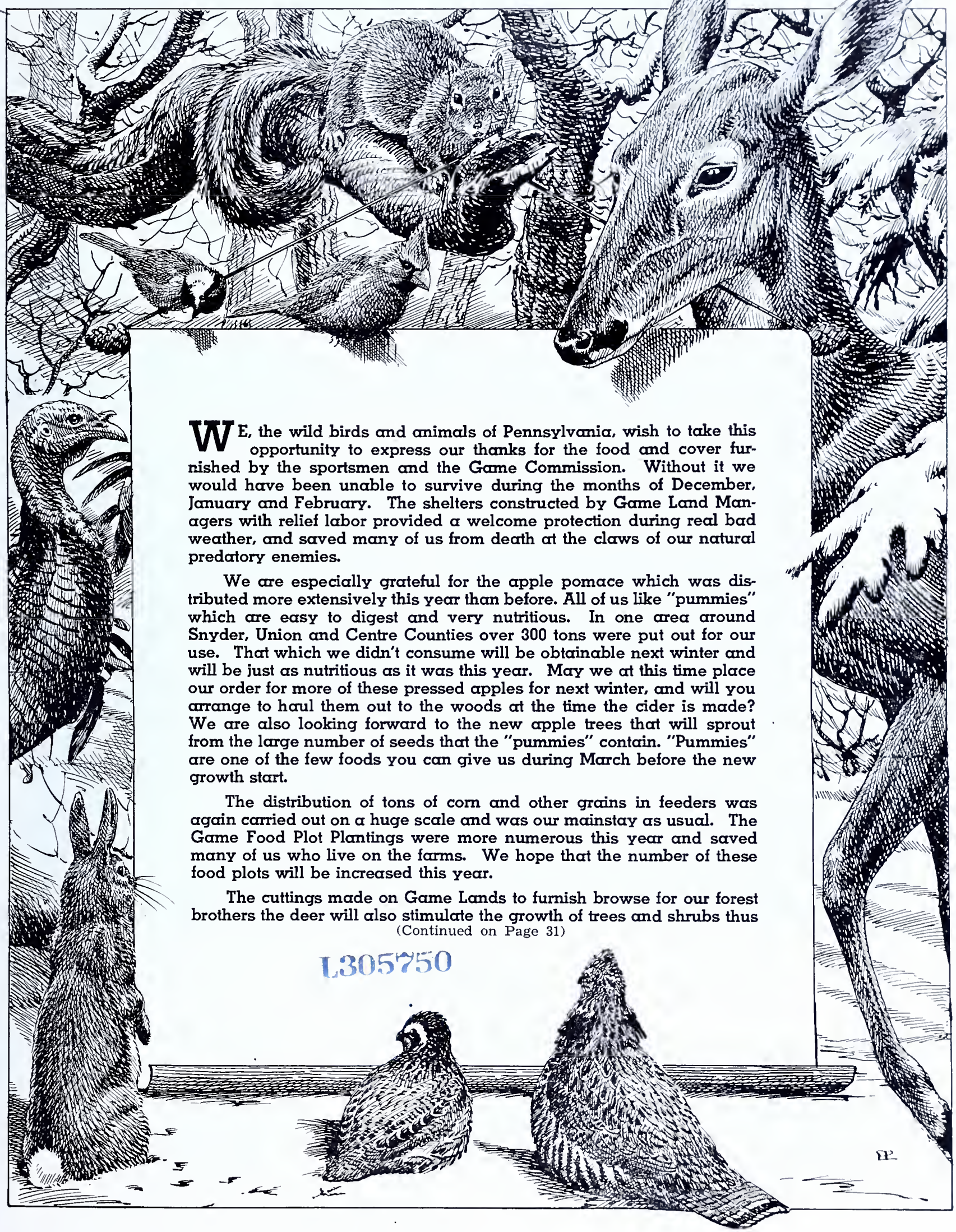
EDITORIAL

April 1940



WE, the wild birds and animals of Pennsylvania, wish to take this opportunity to express our thanks for the food and cover furnished by the sportsmen and the Game Commission. Without it we would have been unable to survive during the months of December, January and February. The shelters constructed by Game Land Managers with relief labor provided a welcome protection during real bad weather, and saved many of us from death at the claws of our natural predatory enemies.

We are especially grateful for the apple pomace which was distributed more extensively this year than before. All of us like "pummies" which are easy to digest and very nutritious. In one area around Snyder, Union and Centre Counties over 300 tons were put out for our use. That which we didn't consume will be obtainable next winter and will be just as nutritious as it was this year. May we at this time place our order for more of these pressed apples for next winter, and will you arrange to haul them out to the woods at the time the cider is made? We are also looking forward to the new apple trees that will sprout from the large number of seeds that the "pummies" contain. "Pummies" are one of the few foods you can give us during March before the new growth start.

The distribution of tons of corn and other grains in feeders was again carried out on a huge scale and was our mainstay as usual. The Game Food Plot Plantings were more numerous this year and saved many of us who live on the farms. We hope that the number of these food plots will be increased this year.

The cuttings made on Game Lands to furnish browse for our forest brothers the deer will also stimulate the growth of trees and shrubs thus

(Continued on Page 31)

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APRIL

A flush of green in meadows brown
A soft breeze blowing free,
Across the hills where sky leans down,
A road keeps calling me;
A road that whispers, "Banish care,
Cast off your troubles grim,
A golden country lingers there
Beyond that distant rim!"

Somewhere beneath those smiling skies
Behind that rosy dawn
Beyond some bend, Enchantment lies,
That laughing, beckons on.
A flush of green in meadows brown
A soft breeze blowing free,
Across the hills where sky leans down,
A road keeps calling me.

And thus is life—Tomorrow waits,
Tomorrow, Fortune's smile
Will open swing the phantom gates
To some glad afterwhile;
And voices whisper, "Banish care,
Cast off your troubles grim,
A golden country lingers there
Beyond that distant rim."

—Carey Holbrook

THE PROPAGATION AND RESTOCKING PROGRAM

By Ross L. Leffler*

Editor's Note: Since Commissioner Leffler submitted the foregoing statement to the Pennsylvania Federation of Sportsmen's Clubs, various persons have made inquiry concerning the Commission's efforts to raise ruffed grouse in captivity. Up to this time the Commission has found it impossible to raise these birds successfully in any large numbers. This likewise has been the experience of every other state which has tried it. However, experimental work is being continued and some day the Commission hopes to find a way to raise grouse successfully.

The big problem in the past has been to obtain fertile eggs from ruffed grouse in captivity. Rarely does the mating urge seem to occur at the same time in both the males and the females. In making comparative tests with eggs laid by our game farm birds and those laid by grouse in the wild, we find that during years when the wild eggs are low in fertility and hatchability the eggs laid by our own experimental birds are equally unsatisfactory. In years when eggs collected from the wild produce a large percentage of good, strong chicks, the results from our own eggs also are better. The Commission has been unable to ascertain what causes this condition.

THE subject of game propagation has received the Commission's special attention for more than ten years. We have gradually expanded this program and our investments in State Game Farms and equipment have now reached almost $300,000. For the current year the total Game Farm budget is slightly more than $184,000. This program has been expanded more than 50% within the last five years.

In the recent expansion of this program a number of factors had to be considered, such as soil and climatic conditions at our several State Game Farms, disease probabilities, and many other items. In view of the very favorable soil and climatic conditions at our Loyalsock Farm, the Commission last year decided to expand that farm and to transfer much of the pheasant work now conducted at the Fisher State Game Farm in Montgomery County, to the Loyalsock Farm in Lycoming County, and to almost double the bobwhite quail propagation at the Fisher Farm. Quail are raised entirely on wire, and there is, therefore, no danger of picking up ground diseases. There has been a constantly growing demand for bobwhites, and the Commission is hoping to expand this program so that it will be able shortly to propagate and hold over the winter for spring release from 20,000 to 25,000 birds annually.

In the production of ringneck pheasants, we are aiming to produce and hold over the winter a minimum of 30,000 pheasants, mostly cocks, to raise and release in the late summer or early fall not less than 10,000 hens, also to furnish interested groups of sportsmen approximately 15,000 six-week old pheasants to be reared to maturity.

We have decided to continue using our present pheasant holding pen facilities at the Fisher State Game Farm to the maximum of their capacity, so that most of the pheasant requirements for southeastern Pennsylvania will be supplied from that farm.

The raising of Chukar Partridges will be discontinued but we propose to continue rearing Hungarian Partridges in limited numbers until we have had more opportunity to ascertain whether these birds will actually become established on a shootable basis in Pennsylvania.

Our wild turkey production has been entirely revamped in the past five years. Under the present plan we are not producing turkeys in such large numbers as formerly but the quality is much higher. We are now endeavoring to produce from 1500 to 2000 turkeys a year.

Our present expanded production schedule, when in full operation, in addition to the day-old pheasant chicks and eggs needed to comply with previous commitments, briefly summarized is as follows:

	Pheasants	Quail	Wild Turkeys	Hungarian Partridges
Full-grown (Spring release)	30,000	20,000	2,000	1,200
12-weeks (Summer release)	10,000 (Hens)			
6-weeks (To sportsmen)	15,000			
	55,000	20,000	2,000	1,200

We are also endeavoring to encourage private game breeders in Pennsylvania, and shortly they will supply us with about 14,000 pheasants, so that this spring we will have more than 44,000 fine pheasants to release, the largest spring stocking program in the history of the Commission.

We also purchased more bobwhites than usual this year, and our total spring release of these birds will be around 17,000.

As the sportsmen of Pennsylvania already know, the Commission is making an effort to develop in each county, (through special propagating areas, institutional grounds, nurseries, etc.) sources from which enough native cottontail rabbits can be transferred to supply our actual needs, and gradually to discontinue the importation of rabbits from Missouri, both because the officials there desire to reduce and finally prohibit exportations, also due to the constant danger of importing diseases. This will assure superior animals and put the sportsman's funds to work right here in Pennsylvania.

Due to the fact that game propagation, game purchase, distribution, and research are so closely related and interdependent, the Commission at its January meeting decided to consolidate two of its operating units in the Harrisburg Office. This consolidation, which merges the Division of Game Propagation and Distribution and the Division of Research into a new Division of Propagation and Research, was considered from all angles for a number of months before taking action. In fact, when the Commission decided upon its reorganization program during the summer of 1938, it agreed that additional consolidations of operations might later be found desirable in the interest of greater efficiency and economy; also that a total reduction of 20% in the Harrisburg Staff shall be made as rapidly as certain activities can be transferred to the field.

The Commission concluded that by merging two operating units in the Harrisburg Office and decentralizing the plan of operating its four State Game Farms, it would guarantee better operating efficiency, save money, eliminate waste, and assure the maximum production of game birds of the highest possible quality for the money expended.

Under this new plan, the Superintendents of the Game Farms, all capable, experienced propagators who will require only limited supervision and assistance from the Harrisburg Staff, will each be in full and complete charge of all farm operations, just as the Field Division Supervisors have been in charge of field activities in their respective divisions during the past year. The Harrisburg Office will serve primarily as a staff service agency to coordinate the work, to handle routine matters, and to render special assistance on disease or nutritional problems whenever the occasion may arise.

The Commission intends to continue, *without curtailment*, its recently expanded game farm and distribution program, and to render sportsmen's organizations which desire to cooperate in raising game the necessary aid to assure success in their undertakings. This aid, as in the past, will come primarily either through trained men connected with the game farms or selected field officers in each Division who have taken special training courses at the farms.

We believe that what the sportsmen of Pennsylvania want is the maximum production of high quality game birds for the money expended, and we feel confident that under the present program this objective will be attained.

*President, Pennsylvania Game Commission.

Propagating Wild Turkeys in The Wild

by

Wm. G. Fluke*

WILD TURKEYS again roam the woods of Pennsylvania in goodly numbers. This increase in the number of birds is due to provisions which have been made for their welfare and management during the past several years. Wise laws and regulations along with game refuges played a part in maintaining and increasing the number of this the most coveted of all kinds of game. One of the greatest factors governing the wild turkey population in Pennsylvania was the chestnut tree which was an important source of food for these birds. The destruction of the chestnut by the blight a number of years ago resulted in the adoption of an extensive game food planting program by the Commission in an effort to replace the loss occasioned by the chestnut blight. The plans which were put into effect were not enough, however, and the Game Commission in 1929 authorized the establishment of a Wild Turkey Farm in Juniata County for the artificial propagation of birds for restocking purposes.

The propagation of birds at the farm was very successful, but later releases of them in the wild was very disappointing. The farm-raised birds did not readily adjust themselves, and often left the remote areas in which they were released. They were found at farm houses, along highways and at roadside gas stations. To overcome this difficulty the Commission authorized a propagation experiment of the birds in the wild to supplement the production at the game farm and to improve the strain. An outline of this program was given in the October 1936 issue of the Game News. Sportsmen will no doubt be very much interested in a further report of that plan, which was then an experiment but which now has become an established program, at it has passed the experimental stage.

The credit for inaugurating the experiment of propagating wild turkeys in the wild in Pennsylvania belongs to no one individual or group. It was not entirely the idea of the members of the Commission, the office staff, or the field force, but many of the old turkey hunters were also consulted and many good suggestions received from them. It was generally agreed by all of these interested parties that the way to re-establish wild turkeys would not be man's way, but the "*Wild Turkey Way*."

Everyone agreed that the wild tom in the mountain certainly would never submit to man's control or devices. He was, and always will be wild, wary, and uncontrollable, and will challenge man on the slightest provocation. The program therefore needed to be so skillfully planned and carefully administered that The Noble Gobbler would just naturally walk into the scene and play his part unsuspecting man's hand in the arrangements.

At the Commission meeting in December, 1935, a small sum of money was set aside for the experiment. Three game refuges were selected in the heart of the best turkey country where it was known that there were wild toms. The officers in charge selected a choice area of about 3 acres within each refuge and fenced it with six foot poultry wire netting. The plots were selected with reference to food, water, and so they would be within the range of a wild gobbler or gobblers. Each area was then stocked with ten carefully selected, choice hens from the Wild Turkey Farm.

The result the first year was both a success and a failure. In two of the areas in early May, dogs dug under the wire and killed most of the hens. The third area was visited by a tom stocked the year before.

However, from the wreckage of the first two areas, about forty eggs and a few small turkeys were secured. These were taken to the Wild Turkey Farm, and the eggs were hatched. The young birds were marked by a toe punch, and became valuable for research work. This research disclosed the fact that the young turkeys were already evidencing in their activity many traits resembling those of the native wild birds. This clearly indicated that the wild tom had introduced wild characteristics which were heretofore not so noticeable in the game farm birds.

From this point, the program was expanded, and set up on a permanent basis. Areas were enlarged to ten or twelve acres, and are of two kinds. The first for egg collection, known as Mating Areas, and the second for use in restocking and called Restocking Areas. An 18 gauge wire much stronger than that first used was selected. This wire is considered heavy enough to stop a bounding deer, and it is extended into the ground to a depth of six inches. Where locust posts are not available, steel posts are used for the fencing.

Wherever possible all turkey areas contain sufficient cleared plots for the sowing of food plots which contain wheat, buckwheat, alfalfa and clover. All areas are planted with reference to crop rotation, thus assuring both grain and greens and at the same time a sufficient supply of insect life for the young birds.

To further safeguard the sanctity of these areas within the refuge, an additional territory surrounding all areas and consisting of about one hundred acres is inclosed by a single strand of wire and set aside as a propagating area, inside which no one is permitted to enter at any time except on official business.

The establishment of these areas was by no means sufficient to assure the success of the program. The employes directly responsible for the management of these areas are the Land Management Protectors, operating under the general supervision of the Division of Game Land Management. The program is carried out under the direct supervision of Mr. Leon Keiser, whose duty it is to coordinate the area activities and those at the Wild Turkey Farm. The employes in charge of the wild turkey program must have a keen interest and love of the work, and have a well grounded knowledge of wild turkey habits. Their duties in successfully administering these areas require them to serve long hours in all kinds of weather, and are so complicated and varied that time and space will not allow an enumeration of all of them. The job, however, requires so much care and skill that the employes can spare very little time or effort in connection with their normal duties, especially during the wild turkey mating and egg-laying season.

Each wild turkey Mating Area is stocked with twenty hens from the Wild Turkey Farm about the 15th of February each year. At areas where the eggs are to be collected and transferred to the Wild Turkey Farm,

Continued on Page 32)

He hears the call of the ladies-in-waiting and struts proudly before them.

*Member, Pa. Game Commission.

INVESTING THE SPORTSMAN'S DOLLAR

by

NELSON E. SLAYBAUGH

★

THE affairs of the Pennsylvania Game Commission have always been conducted strictly on a business basis, and the results therefrom are evaluated in the same way.

Too often those who contribute the funds for this vast enterprise are prone to look upon the use of their money in the light of an expenditure, when in reality it is an investment, a guarantee for the future comparable to an insurance policy.

When stocks, bonds, and other investments yield a fair return on the dollar, it is said to be a good investment. Later on in this article we shall endeavor to prove that the sportsman's dollar in Pennsylvania actually yields big dividends, and that the annual license fee of $2.00 is really a gilt-edge investment, not just an expenditure.

Income and Expenditures

During the fiscal year which ended May 31, 1939, the revenue from all sources credited to the "Game Fund" amounted to $1,486.826.37, establishing an all-time high in the history of the Commission. The previous record was $1,371,250.43 credited to the "Game Fund" during the year which ended May 31, 1938. In the main, this increase in income was due to the record breaking resident license sale in 1938, namely 654,542.

The expenditures for the year which ended May 31, 1939 totaled $1,445,091.80, it long having been the policy of the Commission to keep its expenditures well within the average annual income.

In the April 1939 issue of the Pennsylvania Game News, there was published a "Comparative Statement Showing Income and Expenditures of the Pennsylvania Game Commission, December 1, 1919 to May 31, 1938." The expenditures for the six major functions, and the percentage of each in relation to the total, were also shown. To bring this statement up to May 31, 1939 we refer you to Table Number 3, which accompanies this article.

From the figures in Table Number 3, it will be observed that for the 19½-year period the Commission expended a total of $19,023,-833.86, of whcih $10,892,304.18 (57%) of its total outlay went into the production and stocking of game, public hunting grounds and refuges, and bounties; $6,038,307.84 (32%) for the protection of game, mostly law enforcement; and $2,093,221.84 (11%) for all other expenses.

Land management expenditures of necessity are now increasing, while the amount spent to buy more land is decreasing; also the amount invested in game for stocking has recently jumped much higher while bounty payments have been lower. The Commission is now managing almost 1,000,000 acres for the sportsmen, an increase of more than 50% in four short years. Fixed charges on State Game Lands alone aggregated $29,000 for the year under review.

In a 19½ year period 57% of the total expenditures of the Commission went into the production and stocking of game, public hunting grounds and refuges, and bounties.

Value of Game Taken

As explained in the opening paragraph, there is an investment angle, in dollars and cents, in the conservation program which is often overlooked by the most sanguine sportsman. Do you know that in 1938 there were 25,525,899 pounds of game taken? By placing a value of forty cents (40c) per pound on this game, we arrive at the staggering sum of $10,210,359.60. The value of the raw furs taken annually approximate $750,000.00, or a grand total of $10,960,359.60 as the value of the game and raw furs. The expenditure of $1,445,091.80 (including capital investments) in relation to the value of the game taken indicates a very substantial yield on the investment.

The return on the investment the year given was abnormal because of killing 171,662 anterless deer, which practically doubled the weight in pounds of game taken. The fiscal year 1937-38 would more nearly represent an average yearly yield on the investment. During that year the estimated value of game and raw furs was $5,872,068.80 against an expenditure of $1,409,051.82, which from an investment angle alone paid a most satisfactory dividend—about $4.00 for every dollar invested.

Other Direct Values

What hunting means to over 600,000 of our citizens annually from a recreational standpoint cannot be estimated in dollars and cents. You can readily confirm this statement by asking the shop man who makes arrangements with his employer during the summer months for time off during hunting season. The executive with "jaded" nerves, who looks forward to a week or more in the great open spaces, will gladly testify concerning the recreational value.

(Please turn Page)

If the conservation program benefited only sportsmen directly or indirectly, it might be well looked upon as a selfish enterprise. However, this is not the case. Numerous other avenues of business and farm home income in Pennsylvania are increased annually by over twenty millions of dollars. This estimate is very conservative, as it was based on a lower average amount spent per hunter than was disclosed by a survey made several years ago. The statement of a banker in a small rural community who said, "Our business during the hunting season was more than quadrupled," serves to illustrate the point. Without a doubt this experience could be multiplied many times throughout the State, and in various lines of business.

Capital Investments

The Commission, in addition to its annual operating requirements, has over a period of years made capital investments of which the consideration paid and estimated value now aggregates $3,374,491.04, the details of which, excluding obsolete equipment disposed of, appear below:

	Capital Expenditures
State Game Lands	$2,766,292.45 (a)
Buildings on Game Lands	208,870.42 (b)
State Game Farms (including land, buildings, equipment, etc.)	294,794.59 (b)
Training School (including buildings and equipment)	15,333.29 (b)
Current Equipment (including automobiles, trucks, tractors, graders, office equipment, etc.)	89,200.29 (b)
Total	$3,374,491.04

(a) Consideration paid for lands (including title and survey costs).

(b) Estimated value as of May 31, 1939.

These capital investments must of necessity be safeguarded by annual expenditures for maintenance, development, and utilization in order to reap the maximum benefits therefrom.

Condition of Game Fund

Following a long established policy, the Commission continues to operate well within its income. From time to time it has initiated new programs in keeping with changing conservation needs, but not always as extensively and as rapidly as many sportsmen have desired because it would not be good business to jeopardize the safe operating balance deemed necessary.

The balance in the "Game Fund" as of May 31, 1938 and May 31, 1939 is explained in "Analyses of Game Fund Balance", Table Number 4, which appears directly below Table Number 2.

As a self-sustaining Department, with no appropriations from general State revenues, it is of paramount importance that the Commission base its expenditures on a revenue budget estimate predicated on a conservative license sale. Therefore, we base our income for budget purposes on an expected sale of 550,000 resident and 7,000 non-resident licenses, plus a reasonable income from game law penalties, special game permits, etc. This is done with a definite understanding that any

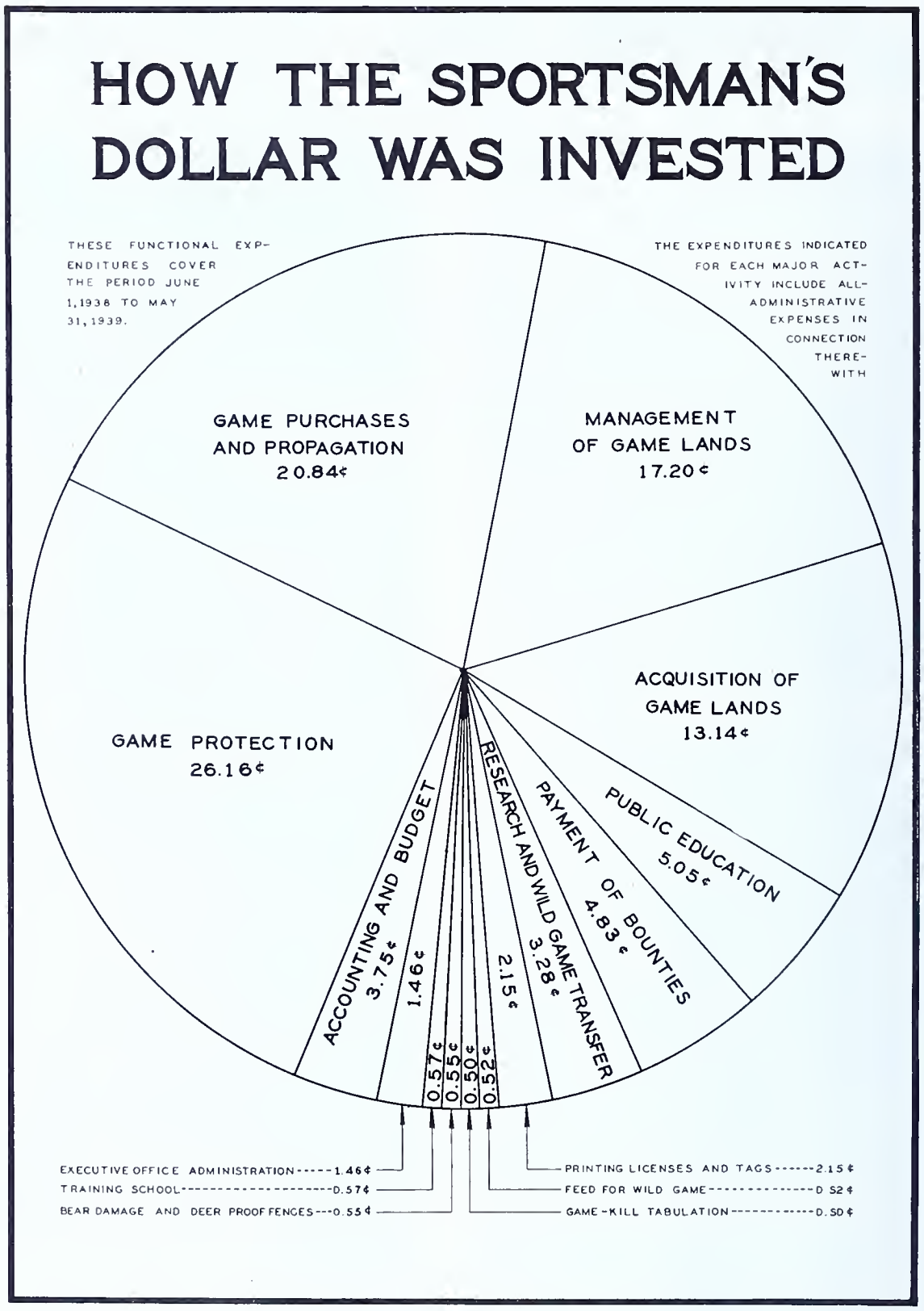


TABLE No. 3
STATEMENT OF INCOME AND EXPENDITURES
December 1, 1919 to May 31, 1939
(19½ years)

Income	$19,451,986.73	
Total Expenditures	19,023,833.86	
MAJOR FUNCTIONS:		
Protection Expenditures	6,038,307.84	(32%)
	68,571.62*	
Land Purchase Expenditures	2,766,292.45	(15%)
Land Management Expenditures	2,791,157.76	(15%)
Game Farm Expenditures	1,202,819.38	(6%)
Game Purchase Expenditures	1,742,952.41	(9%)
Bounty Expenditures	2,320,510.56	(12%)
	68,571.62*	
Totals for Six Major Functions	16,862,040.40	(89%)
All other Expenditures	2,093,221.84	(11%)
Grand Total for All Purposes	$19,023,833.86	(100%)

*Land bought and subsequently sold to Department of Forests and Waters.

TABLE No. 2

SUMMARIZED FUNCTIONAL EXPENDITURES

The expenditures of the Commission during the fiscal year ending May 31, 1939 have been subdivided into major activity groupings as follows:

		Part of Dollar
GAME PROTECTION (Salaries and Expenses incident to Law Enforcement, Game Feeding, Game Distribution, Establishing Division Offices, Assisting in Enforcement of Fish and Forest Laws, and other field activities, but excluding costs for Training School and Feed for Game)	378,046.62	26.16c.
GAME PURCHASES AND PROPAGATION (Including expenditures for equipment and operating four State Game Farms)	301,118.04	20.84c.
MANAGEMENT OF GAME LANDS (Salaries and Expenses of Refuge Keepers and other employes incident to maintenance and development work on 851,541 acres of purchased and leased Game Lands and 1092 Game Refuges, and fixed charges in lieu of taxes)	248,586.87	17.20c.
ACQUISITION OF GAME LANDS (Including title and survey work, and all expenses incident to land acquisition or leasing—mostly capital investment)	189,870.23	13.14c.
PUBLIC EDUCATION (Including Game News, Motion Pictures, Exhibits, General Bulletins, etc.)	73,042.90	5.05c.
PAYMENT OF BOUNTIES	69,790.86	4.83c.
ACCOUNTING AND BUDGET (Including Legal Advertising, Mailing and Storeroom, issuance of Special Permits, General Printing, etc.)	54,283.09	3.75c.
RESEARCH (General research and experimental activities, including $6,000.00 for Cooperative Research Project at Pennsylvania State College, $12,584.17 to inaugurate the Commission's extensive rabbit and other game transfer program, and a limited amount of Federal-Aid money for approved Research Projects)	47,276.80	3.28c.
HUNTING LICENSES AND TAGS	31,063.78	2.15c.
EXECUTIVE OFFICE ADMINISTRATION (Executive Office salaries and expenses, and Expenses of Commissioners)	21,136.37	1.46c.
TRAINING SCHOOL (Training of Officers)	8,159.20	0.57c.
BEAR DAMAGE AND DEER-PROOF FENCES	7,926.56	0.55c.
FEED FOR WILD GAME	7,575.85	0.52c.
GAME KILL TABULATION (Including expenses incident thereto)	7,214.63	0.50c.
TOTAL	$1,445,091.80	$1.00

TABLE No. 4

ANALYSIS OF GAME FUND BALANCE AT PERIODS INDICATED BELOW

	May 31, 1938		May 31, 1939	
Balance in Treasury Department to Credit of "Game Fund"	$1,013,348.80		$1,088,829.41	
Add: Advancement Account for Payment of Bounties	40,000.00		68.50	
	$1,053,348.80		$1,088,897.91	
Less: Expenses Chargeable to this Period, but Paid by Treasury Department after May 31	60,711.38		54,525.92	
Funds Available		$ 992,637.42		$1,034,371.99
Less: Amount Reserved from Previous and Current Budget Allocations to Cover Commitments for Land Purchases and other Items Chargeable to Current Fiscal Year	233,965.61		278,411.29	
Less: Amount Allocated and Committed for Budgetary Purposes for Ensuing Fiscal Year	401,750.00	635,715.61	410,551.14	688,962.43
Net Operating Balance Available		$ 356,921.81*		$ 345,409.56*

*Approximate amount required for Operating Expenses each year after May 31, until revenue from sale of licenses becomes available in the fall.

surplus money accruing to the credit of the "Game Fund" from the sale of more licenses than the basis used in the budget **shall not be expended during the year in which collected**, but shall be held in reserve until the following year for budgetary purposes to supplement the income based on a conservative license sale as herein explained.

Budget Controlled

This method of budgeting not only precludes the possibility of expenditures exceeding income, which would mean a curtailment of planned functional operations during the last six (6) months of the year, but it provides a more liberal budget for the following year, with a reasonable amount thereof covered by cash in bank at the beginning of the year. The unexpended budget balances at the end of any year, plus the revenue in excess of the budget estimate, make up the amounts shown under Table Number 4 under the item, "Amount Allocated and Committed for Budgetary Purposes for Ensuing Fiscal Year."

The sportsman desiring only a condensed statement of the expenditures during the year which ended May 31, 1939, is referred to Table Number 1, (in graph form) "How the Sportsman's Dollar was Invested." For more detailed information as to the items included within each subdivision of the dollar (as shown in Table Number 1), your attention is directed to Table Number 2, "Summarized Functional Expenditures".

Some sportsmen desire much more detailed information than it is possible to set forth in a practical chart. To meet this need there is published with this article Table Number 5, a detailed "Statement of Revenue and Expenditures June 1, 1938 to May 31, 1939."

Licenses Issued

Year	Resident	Non-Resident
1913	305,028	....
1914	298,972	462
1915	262,355	532
1916	290,422	662
1917	315,474	588
1918	311,290	478
1919	401,130	1,128
1920	432,240	1,725
1921	462,371	1,761
1922	473,735	2,126
1923	497,216	2,328
1924	501,572	2,558
1925	521,855	3,190
1926	520,574	3,468
1927	501,622	4,879
1928	437,727	1,190
1929	505,103	4,823
1930	530,392	6,009
1931	572,779	8,964
1932	537,451	5,251
1933	524,337	4,966
1934	568,666	6,024
1935	606,469	8,460
1936	534,573	7,124
1937	598,261	8,357
1938	654,542	7,584
1939*	647,000	8,850

*Preliminary report—subject to change. Exclusive of 1082 replacement licenses issued.

(Please turn Page)

TABLE No. 5
STATEMENT OF REVENUE AND EXPENDITURES — PENNSYLVANIA GAME COMMISSION
FISCAL YEAR JUNE 1, 1938 TO MAY 31, 1939

REVENUE

Balance in State Treasury to credit of "Game Fund" June 1, 1938	$1,013,348.80	
Add: Advancement for the payment of bounties	40,000.00	
	$1,053,348.80	
Less: Unwarranted requisitions chargeable to year ended May 31, 1938	60,711.38	
Funds available June 1, 1938		$ 992,637.42
Receipts during period:		
Net Revenue from Hunters' Licenses	$1,353,212.76	
Game Law Fines	87,344.48	
Special Game Permits	14,234.00	
Interest on Deposits	6,353.50	
Forest Products from Game Lands	4,843.51	
Skins Sold	2,433.42	
Unserviceable Property	943.31	
Rentals	566.60	
Publications	13,429.30	
Contributions from Federal Government	916.67	
Miscellaneous Revenue	2,548.82	
Receipts credited to Game Fund during year		1,486,826.37
Total credits during year, plus balance at June 1, 1938		$2,479,463.79

EXPENDITURES

	Executive Office and Division of Accounting and Budget		Propagation Purchase & Distribution of Game	Game Research	Law Enforcement	Refuges and Lands		Public Information	Total	
	General	Bounties				Acquisition	Management			
Salaries	$ 41,381.66	$ 4,511.13	$ 26,338.15	$ 8,836.09	$192,299.54	$ 12,931.26	$ 70,571.95	$ 14,502.00	$ 371,371.78	
Traveling Expenses of Salaried Employes	2,584.27	60.65	3,960.86	4,547.32	99,160.31	401.42	17,993.99	5,164.37	133,873.19	
Deputy Game Protectors:										
Wages $23,405.24										
Expenses 13,343.82		.....	.....	.....	36,749.06	.....	.....	.....	36,749.06	
Wages:										
Labor Cutting Fire, Refuge and Boundary Lines, Road Repairs, etc		.....	.....	.....	.....	.....	42,792.35	.....	42,792.35	
Labor at Game Farms, etc.	3,537.35	1,299.17	43,837.24	6,737.92	12,780.22	790.74	..	2,023.68	71,006.32	
Cooperative Farm-Game Program	.....	.....	....	.....	.....	5,869.17	36,734.62	.....	42,603.79	
Purchase of Game	.....	.....	119,216.01	.	.....	.....	....	.....	119,216.01	
Feed for Game	.....	.....	30,195.77	1,010.91	7,471.70	.....	104.15	35.55	38,818.08	
Express on Game	..	....	17,544.14		....	.....	....	.....	17,544.14	
Express and Cartage	12.00	51.28	3,809.64	812.61	580.33	.57	1,228.10	858.00	7,352.53	
Purchase of State Game Lands (title and survey included)		....	27,248.98	.	.....	133,759.73	.....	.....	161,008.71	
Fixed Charges in Lieu of Taxes	.	....	106.69	.	.....	29,113.66	..	.....	29,220.35	
Building and Construction	.	....	6,860.32	740.32	.....	.....	22,801.84	.....	30,402.48	
Repairs to Buildings, Grounds and Equipment by Contract	98.83	.....	255.44	7.00	14.68	22.50	2,036.00	146.47	2,580.92	
Training of Officers	.	....	.....	..	5,711.44	.....	2,447.76	.....	8,159.20	
Equipment	653.57	12.75	2,736.93	2,650.58	729.60	814.54	1,138.27	1,834.50	10,570.74	
Miscellaneous Supplies	1,674.61	226.29	9,492.09	13,487.48	5,822.94	131.68	20,668.89	4,758.73	56,262.71	
Motor Equipment, Passenger Cars, Trucks, Tractors, etc.	.....	.....	..	.....	450.92	.....	6,937.80	.....	7,388.72	
Motor Supplies	637.26	....	1,483.17	21.76	4,816.52	577.67	8,092.43	543.28	16,172.09	
Light, Power and Fuel	...	....	2,948.06	359.36	....	.....	225.97	12.35	3,545.74	
Insurance	717.98	70.27	997.84	147.97	3,295.73	292.23	2,386.84	239.48	8,148.34	
Postage, Telephone and Telegraph	9,782.70	1,607.20	1,115.99	240.83	10,799.32	156.97	2,831.62	1,796.26	28,330.89	
Rentals—Monthly Auto Storage, etc.	376.50	.....	208.29	.....	689.00	2,697.00	4,022.41	921.50	8,914.70	
Bounty Payments and Grants	...	61,418.50	.....	6,000.00	....	.....	.....	.....	67,418.50	
Refunds of Receipts	14.00	.....	.....	.....	832.00	.....	.....	.....	846.00	
Game-Kill Tabulation plus expenses incident to checking lists	7,214.63	.....	.....	.....	.....	.....	.....	.....	7,214.63	
Fees:										
Attorneys, Medical, Taxidermy, etc.	785.70	.....	676.50	.....	607.00	.....	1.00	131.50	2,201.70	
Deer-Proof Fence, Damage by Bears	7,926.56	.....	.....	.	.....	.....	.....	.....	7,926.56	
Other Maintenance Services and Expenses	202.14	166.27	714.07	1,001.79	671.11	1,016.45	1,220.02	281.11	5,272.96	
Newspaper Advertising	5,332.58	..	.....		....	..	3.00	.....	5,335.58	
Printing, Binding and Paper	6,304.09	223.00	491.57	392.11	1,525.32	472.79	4,290.31	39,330.06	53,029.25	
Printing Hunters' Licenses, Tags and Misc. Forms (through Dept. of Revenue)	31,063.78	.....	.....	...	.....	.....	.....	.....	31,063.78	
Administering State Employes' Retirement System (through Dept. of State)	1,324.22	144.35	880.29	282.75	6,223.02	821.85	2,609.46	464.06	12,750.00	
TOTALS	$121,624.43	$ 69,790.86	$301,118.04	$47,276.80*	$391,229.76	$189,870.23	$251,138.78	$ 73,042.90	$1,445,091.80	$1,445,091.80

Funds available May 31, 1939 (Please refer to table No. 4 for explanation concerning an analysis of this balance) $1,034,371.99

*This item includes $6,000.00 for Cooperative Research Project at Pennsylvania State College, $12,584.17 to inaugurate the Commission's extensive rabbit and other game transfer program, and a limited amount of Federal Aid money for approved Research Projects.

PREVENT FOREST AND BRUSH FIRES

PLANT FOOD BEARING TREES AND SHRUBS FOR WILDLIFE

PUT UP BIRD HOUSES AND BIRD BATHS. CONTROL CATS

Several hundred members of the Tri-County Sportsmen's Association, Upper Dauphin, Northumberland and Schuylkill Counties, many of them emulating the white camouflage of the Finns, put on a big crow hunt recently at the culmination of which they ate their enemy at an evening banquet. "Jake" Phillips, popular president of the association can be seen at top right, while at left center he and "Jeff" Boyer, local fur dealer are "picking feathers." Mr. Phillips' wife, with a pan full of the enemy is shown at bottom left.

Forest Fires are

Killing Our Game

There's a forest fire every three minutes.

Once game filled—now desolate and barren.

Fish are doomed in hot, fire-polluted water.

Sportsmen, face the facts: We are not holding our own in the fight against nature's raging destroyer

By ARTHUR GRAHAME

Reprinted Courtesy Outdoor Life.

THE first thing that I discovered when I started to find out how much damage forest fires are doing to our game and our game fish—and what we sportsmen can do about it—was that men of varying interests view the problem from widely different angles and drive home their points with staggering figures which do not always jibe.

In my attempt to get the facts I talked with many men who for one reason or another are trying to outwit the fire devil—with the Bureau of Biological Survey wildlife experts who are working to protect and increase our supply of game; with Senator Charles L. McNary, of Oregon, who for twenty years has led the fight in Congress for adequate protection of all our timberland against fire; with Forest Service officials who are working hard and effectively at their double-jointed job of protecting the forests (which in turn protect watersheds) and of making our national forests happy hunting grounds for sportsmen and for all other wildlife lovers; with officials of the American Forestry Association, an organization which, among other points of view, represents that of enlightened lumbermen and timberland owners.

All these enemies of forest fires agree on three things:

They agree that forest-fire protection should be our fundamental conservation effort—that if we are going to continue to allow our forests to be destroyed by fire there is no use in trying to conserve our wildlife or in continuing our flood-prevention work.

They agree that inadequate fire protection is costing the United States an average of 40 million dollars a year in actual property destruction, and an additional loss of at least 100 million dollars a year in intangible values that include game and game fish.

They agree that the only way in which we can hope to scotch the fire devil is for the federal government to loosen its purse strings and pay a greater part of the total cost of fire protection than it is paying now or ever has paid in the past.

Forest Service officials in Washington told me that in 1938 forest fires burned close to 34 million acres of American woodland. Thirty-four million sounded like a lot of acres, but the figure failed to flash a vivid and convincing picture on the screen of my mind. Then when I figured out that 34 million acres is about the land surface of the six New England states, I got a fire picture that was almost too sensational for my imagination to take in—a picture of a forest fire starting somewhere in the neighborhood of Eastport, Maine, spreading west through all of Vermont and New Hampshire as far as Lake Champlain, and then roaring southward over Massachusetts, Rhode Island, and Connecticut—even into the outer suburbs of New York City.

A conflagration like that would chase even a European war off the front page of every newspaper in the United States. And by wiping out the hunting and fishing grounds of a whole great section of the country, it would bring home to sportsmen the stark facts of how we are allowing our game to be burned up and our fishing streams to be ruined. But though there are around 175,000 forest fires a year, only a few of them are spectacular enough to make front-page news, so the average hunter or angler has no conception of what fire is doing to ruin his sport.

Even men who have studied wildlife and its conservation for years find it impossible to make more than rough estimates of how much game is destroyed by forest fires. Once unchained, the fire demon wipes out living things in a way that leaves few traces.

An old logger used to tell how he was seated on the steps of his boarding house in the little Wisconsin lumbering town of Peshtigo when a forest fire exploded into its streets on a hot October evening in 1871. He saw a pretty girl run down a blazing pine sidewalk, her yellow hair streaming; saw her stop dead in her tracks as her hair burst into flames. The next day, after the fire had passed, he remembered just where he had last seen her. He looked there, and found a pair of blackened nickel garter buckles and a little heap of gray ashes.

Because forest fires leave so little trace of the living things they have destroyed, wildlife-management men find it impossible to make more than a rough estimate of the game loss in a fire-devastated area. They find a few animal and bird carcasses burned to cinders, and perhaps a stream or two with boiled trout floating belly-up. The rest of the wild things are gone. Perhaps some of them escaped, but the chances are—especially if the fire was a big one—that most of them perished.

(Please turn Page)

Dropping from a plane, the modern forest fire-fighter can stop small fires before they get out of hand.

Scientists of the Bureau of Biological Survey say that they are figuring low when they estimate that one game animal or game bird is destroyed for each acre of wildlife domain that is burned. Now, in 1938 there were 34 million such acres burned. But the loss of potential game was far heavier than the loss of those 34 million deer, quail, pheasant, rabbits, ducks, and grouse. The immediate loss must be multiplied by the number of years it will take nature to restore the burned area to a point where it can again support its normal wildlife population. In many districts, especially in dry areas, this restoration period will stretch over many years.

Some more big figures—but they are necessary to full understanding of the story. There are, roughly, 630 million acres of forest land in the United States. Of these, 207 million acres are within national forests. The other 423 million acres are state or privately owned. The national forests are efficiently—but not perfectly — protected against forest fires. About 60 percent of the state and privately owned timberland has organized fire protection, which ranges in effectiveness from adequate to decidedly inadequate. But about 165 million acres of state and privately owned woodland have no fire protection at all.

No one can estimate how many game birds and small-game animals there are in our 630 million acres of woodland, but a carefully compiled big-game census gives us a fairly accurate deer population figure. According to this census there are about 5¼ million deer in the United States—white-tail, black-tail, and mule deer. About 1½ million of them are in national forests, the remaining 3¾ million—70 percent of our deer population—are on state or privately owned land. That means that about 1½ million deer are on land that is not protected against forest fires. Those 1½ million deer which we fail to protect are 28 percent of all our deer, and represent 40 percent of all deer outside national forests.

All states except Delaware and Kansas have some deer, although several states have mighty few. Last fall thirty-four states had enough deer to allow them to be hunted. If you leave out of consideration the two Carolinas' uniquely long open seasons, the average deer season was about three weeks, but in many of the states only restricted areas were opened to hunting.

It is evident that we protect our deer carefully against overhunting. It is equally evident that we fail to give a third of our deer —does and fawns as well as bucks—any protection at all against forest fires. We follow that same penny-wise, pound-foolish policy with most of our other game animals and with our upland game birds—even with our waterfowl and shore birds, which often are destroyed by woodland fires while nesting a mile or so in from the shore. We can't know exactly how many deer and quail and pheasants and rabbits and ducks are burned up each year—but any wildlife expert will tell you that fire kills more game than is taken by hunters, even when open seasons are liberally long and bag limits generously large.

Then there are our streams. Fire is the most effective of all spoilers of fishing. If it doesn't kill the fish outright, it destroys the cover and shade which keep the stream cool enough for such cold-water gamesters as the trout. It fouls the water with the run-off from fire-denuded ground, and sometimes, through destruction of the watershed, causes the stream to dry up.

Forest fires spoil hunting and fishing. Of course, they do much more than that. Every year they take a toll of human lives. They are a serious cause of unemployment. Every year they burn up 40 million dollars' worth of timber. By destroying watersheds they cause devastating floods, which in turn make necessary tremendously expensive flood-control work.

Everybody loses when the forests burn!

What can we sportsmen do to keep our forests from burning?

We can ask our representatives in Congress to vote the appropriations which will make it possible to extend fire protection to the 165 million acres of state and privately owned woodland which now is unprotected.

Fire protection works—and figures prove that it works. Forty-one states are cooperating with the Forest Service in protecting 258 million acres of state and privately owned woodland. Only one percent of that protected area is burned each year, but 16½ percent of the 165 million acres of unprotected woodland are burned annually. In Florida, Georgia, and Mississippi, in 1937, forest and brush fires burned only one acre in sixty of protected land, but they burned *seventeen* acres in sixty of unprotected land!

It is estimated that adequate protection of our 423 million acres of state and privately owned forest land would cost about 18 million dollars a year. Back in 1924, Congress passed the Clarke-McNary bill, authorizing an annual appropriation of 2½ million dollars to be expended by the Federal government in cooperation with state forestry departments for the protection of these lands. The act also authorized the Secretary of Agriculture, at his discretion, to match state and private expenditures for this purpose dollar for dollar.

Unfortunately, the Appropriations Committee of the House of Representatives never has appropriated even the minimum of 2½ million dollars. They came closest to it last year when they appropriated 1¾ millions—but that fell a long way short of matching, dollar for dollar, state and private expenditures of 7¼ million dollars.

Forest fire protection isn't a local or even a state job. It's a national job, and to get adequate results the national government will have to bear its full share of the expense burden.

No amount of protection can make the forests absolutely safe. The terrible Tillamook fire in Oregon, which in 1933 destroyed more than 10 billion board-feet of timber worth 275 million dollars, and cost 14,000 men their jobs for six years, started when a Douglas-fir log, on its way to a landing, rubbed against a tinder-dry cedar windfall and threw sparks into dry logging debris. Lightning cannot be guarded against. It starts an average of 15,000 forest fires a year —8.7 percent of all our forest fires, and almost 40 percent of those in our national forests.

But most forest fires are man-made. Setting the woods afire is an old American custom. Away back in 1761, Lieut. John Montresor, a British army officer, made a woods journey from Quebec to what is now Waterville, Maine. A few days after he started he lost four of his birch-bark canoes in a forest blaze. That night he wrote in his journal: "These accidents happen frequently from fires left in the woods by workmen and passengers, the sparks remaining until a wind blows them up into a flame, which, in a dry season, rages with great fury."

Careless "workmen and passengers" are still starting fires in the woods, and it is significant that in unprotected areas well over 90 percent of the fires are man-caused, against only 60 percent in our carefully protected national forests.

Forest-fire protection means keeping preventable fires from starting, spotting all fires as soon as they start, and getting trained fire

fighters and efficient equipment to each blaze quickly enough to keep it from growing into a big fire. That all costs money—but experience has proved that it is money wisely spent.

Unfortunately for our forests, some of our representatives in Congress don't feel that way about it. Last summer when Congress adjourned, an Appropriation Committee member who hails from a big Middle Western city was asked if an increased appropriation for forest-fire protection had been passed. "No," he said. "We didn't pass it. We don't have forest fires any more." While the honorable gentleman was talking, three whopping big fires were raging on the Pacific slope—and it is probable that before he had lighted his next cigar another one had started somewhere in the United States. On the average, we have a new forest fire *every three minutes.*

The 207 million acres which is protected against fire by the Forest Service is 33 percent of all our timberland, but the recent average of about 11,000 fires a year in our national forests is only about 6½ percent of the total. That means that our national forests are getting good fire protection—but even so, an average of 287,000 acres of them are burned each year.

The reason? The same one that leaves more than a quarter of all our timberland unprotected against fire—because Congress has refused to appropriate the money that the Forest Service needs to do its job.

For the next several years the Forest Service is going to need increased appropriations for forest-improvement work which will result in increased fire protection—nine million dollars a year for the building of new roads and trails, and for other improvements which include additional lookout towers to bring every square mile of the forests under observation, and another million a year for other fire-protection work and to keep trained and experienced guards on duty all year round instead of just during the season when the fire peril is most acute.

One of the greatest needs of the Forest Service is an increased appropriation for experimental work in developing new methods of fighting forest fires. It has been suggested many times that planes could be used to black out flames by bombing them from the air with chemicals. It also has been suggested that fires could be blotted out by a barrage of chemical-filled shells from long-range artillery, and that fields of chemical-filled land mines could be used to stop big fires.

The Forest Service fire-fighting experts agree that these novel methods probably would extinguish fires, but so far as they have been able to determine (through the amount of experimenting possible under limited appropriations), they would be no more effective, and a lot more expensive, than the method now in use—which, a veteran smoke chaser explained to me is to get to the fire fast and then "lean on it and sweat."

However, the airplane has been found to be valuable for scouting fires and for transporting fire fighters and their supplies to blazes in areas beyond roads and trails. The Forest Service now has seventy-six emergency landing fields close to potential danger spots. More are needed.

When the fire-fighting crews are in action in an area where landing a plane is impossible, their supplies are dropped to them by parachute. Recent experiments conducted in the Chelan National Forest in Washington have proved the value of parachutes in getting single fire fighters, or small crews, to fires just starting in inaccessible country.

The specially designed parachute used for this work has an outside convex canopy around the rim of the usual inverted-bowl type of canopy, with flaps which permit the jumper to steer by pulling on the shroud lines, without any danger of having the 'chute collapse. The jumper wears a heavy duck suit padded with sponge rubber, steel face mask, neck protector, and ankle supports to protect him when landing in rough country. In a pocket he carries a climbing rope for use if he gets snagged in a tree while descending. A new sixty-pound fire-fighting kit—which includes shovel, ax, canteen, light radio set, and two days' emergency rations—is dropped by another parachute before the jumper leaves the plane. When he reaches the ground he crawls out of his protective suit, finds his kit, and gets to work. Even alone, an expert smoke chaser can do wonders if he reaches a fire before it gets well started.

In districts where there are roads and truck trails, motorized equipment is tremendously effective in getting to and controlling fires quickly. Machines such as the recently developed combined tractor, bulldozer, and water tank are real fire killers. So are tankers, which are trucks carrying water, pumping apparatus, and some thousands of feet of hose.

Even the individual fire fighter's equipment is being mechanized. The one-man pump—a back-pack water tank and a trombone pump—has prevented the breakaway of hundreds of small fires. Efforts now are being made to reduce the weight of this outfit. A motor trencher, which looks like a wheelbarrow with a small gas engine mounted on it, does the work of many shovelers in fire-line building. All these mechanical aids to fire fighting are new, and most of them demand experimental work for their perfection—and experimental work always costs money.

Everybody loses when the forests burn. We sportsmen lose two ways—as hunters and fishermen by having our sport ruined, and as citizens by having many million dollars' worth of valuable natural resources destroyed. So why let the forests burn? All that is needed to save them is money—and every dollar spent for forest-fire protection will help preserve our game and game fish, and will save many dollars within a very few years.

Write to your senator and your congressman about it. Tell them that you are in favor of increased appropriations for federal aid, under the Clarke-McNary Act, for protecting state and privately owned timberland, and that you advocate increased Forest Service appropriations for the protection of our national forests against fire. And tell them that you want them to use their influence to have these increased appropriations made at *this* session of Congress.

Photos by U. S. Forest Service.

A back-pack fire extinguisher is an effective, modern device, but we need many more of them.

These quail eggs will never hatch. What's more, there will be no upland hunting here for many a year to come.

SPORTSMEN'S QUERIES

By CHAS. F. STAMBAUGH

KILLING A WOUNDED DEER

Q. If one shoots and wounds a buck in season, and the deer gets up and crawls into the brush, and another hunter kills this wounded deer, whose deer is it?

H.J.W.M.—Kutztown, R.D., Pa.

A. If this deer actually continued in flight after it was knocked down by the first hunter, it legally belongs to the second hunter. The Game Law provides that the legal ownership of game shall be in the hunter whose wound stops the flight of the animal and enables him to take possession of the carcass. If, therefore, the wounded deer continues in flight and another hunter brings it down, the first hunter has no claim whatsoever to it. However, if a hunter kills a deer where it had been brought down by another, the second hunter has no legal claim to the animal, as it belongs to the hunter who inflicted the wound that brought the deer down.

* * *

CARRYING RIFLE AFTER KILLING DEER

Q. Is it lawful to carry a rifle in the woods after the hunter has killed a deer, not with the intention of killing a second deer, but for protection. One of our party driving deer without firearms had an encounter with a bob cat.

J.H.H.—Upper Black Eddy, Pa.

A. While our law does not specifically prohibit a deer hunter from carrying a rifle after he has killed a deer, we see very little excuse for doing so, in spite of the fact that you state a hunter had met a wild cat when not having a firearm. The fact is that most wild animals will flee from human beings unless seriously wounded or cornered, and we question whether this cat would have annoyed the hunter in any manner whatsoever. The contention that firearms must be carried for protection against wild animals is, in most cases, without foundation, and is usually only an excuse for carrying a gun to kill a second deer.

* * *

GRAY FOX WEIGHT; GUN LOAD FOR DEER

Q. (1) What is the weight of the heaviest gray fox of which you have record, being killed in Pennsylvania?
(2) Which would you consider the best cartridge for central Pennsylvania deer hunting: 250-3000, or the 30-30?

C.W.Y.—Elizabethville, Pa.

A. (1) The Commission does not attempt to keep a record of the weight of gray foxes presented for bounty, as the large number received throughout a winter season prevents our doing so. Two leading National authorities on wild animals state that the average weight of the gray fox is eight (8) pounds. One of the Commission's research men weighed two (2) gray foxes taken last fall in Snyder and Union Counties, and each weighed over eleven (11) pounds. Apparently twelve (12) pounds is about the limit on gray foxes.

(2) Of the two loads for deer hunting, we would much prefer the 30-30, as the bullet is somewhat heavier, and even though it travels at less velocity than the other one, is more effective in killing power.

* * *

BOX-TRAPPING RED SQUIRRELS

Q. Is it possible to use a box trap to catch pine (red) squirrels?

J.A.M.—Ramey, Pa.

A. No. The use of box traps to catch pine squirrels is illegal in this State for the reason that these squirrels are classed as game animals and the trapping of any game, except raccoons, is prohibited except by special permission of the Game Commission when it is necessary to remove game animals to a new location. This species of squirrel must be taken with legal gun or bow and arrow, the same as is required for hunting rabbits, pheasants, wild turkeys and other small game.

* * *

SNORTING SOUND BY DEER; WHISTLE OF THE "BOBWHITE"

Q. (1) Is the snorting or whistling noise made by the white-tailed deer, made by both buck and doe, or is it by the buck only?
(2) Is the "Bobwhite" whistle made by both male and female Bobwhite quail, or just by the male?

L.C.B.—Punxsutawney, R.D., Pa.

A. (1) The snorting sound made by deer is characteristic of both the buck and the doe, although the buck is somewhat noiser than the doe in this respect. However, the whistling sound is commonly believed to be made only by bucks, and this during the mating season.
(2) The "Bobwhite" whistle coming from the quail of that species is done nearly always by the male bird, who takes the lead in calling. Occasionally the female may answer with a somewhat similar but more modulated call, usually a single whistle only. The male is the real "songster" of the family, but both sexes regularly use the assembly call.

SNOW SHOE VS. JACK RABBIT

Q. In order that we might settle a dispute among our members, I would appreciate if you would furnish me with information relative to the difference between a domestic jack rabbit and a domestic snow shoe. Also, how can you distinguish one from the other?

A.J.R.—Bethlehem, Pa.

A. We are somewhat in doubt as to what you mean by a "domestic jack rabbit", as this species is not native to Pennsylvania. The snow shoe rabbit occurs in a wild state within this Commonwealth and has been with us for many years. Our only comparison therefore is between the Kansas jack rabbit and the Pennsylvania snow shoe. About the best way to distinguish them is in the size of the animals, and the ears. The snow shoe averages about 3 pounds, whereas the jack rabbit is twice as large, averaging 6 pounds in weight. The jack has ears 5 inches in length which are very conspicuous at all times, whereas the snow shoe rabbit has average length ears. Both are about the same brown color in summer, but between the middle of October and May 15, the snow shoe rabbit is usually almost pure white, whereas the jack remains the same color the year round. The legs of the jack rabbit are much longer, but its feet are smaller than those of the snow shoe, which is equipped with broad, heavy feet to run easily over the snow.

* * *

WEIGHT OF CUB BEAR

Q. Was there ever in the history of the Pennsylvania Game Commission a weight limit on bear?

J.B.—Nanticoke, Pa.

A. No. Cubs, or bears less than a year old, were first given protection in Pennsylvania in 1925, but there has never been a minimum weight placed on bears. The most definite method of determining a bear less than a year old is by its teeth; their weight varies so extensively that this method of determining a cub is not reliable. **The safe, sensible thing to do is to pass up all small bears; let them grow up!**

* * *

THE GROUNDHOG SEASON

Q. Is Spring shooting of woodchucks or groundhogs permitted this year?

R.A.W.—Harrisburg, Pa.

A. No. The 1940 season is July 1 to September 30, Sundays excepted, and the daily bag limit is four (4). There is no season limit. The shooting hours are 6:00 A. M. to 7:30 P. M., Standard Time.

Planting Food and Cover

By James N. Morton

THIS is the time of year when thoughts of those interested in wildlife turn to the planting of material which will assist it in finding sufficient food to eat during next fall and winter.

To those who may not yet have made plans for this all important work, a reminder is given in pictorial form on the center spread of this issue.

Sportsmen's organizations and interested individuals can do much toward helping improve the living conditions for wildlife by planting trees and shrubs which furnish cover and food supplies, and in planting plots or strips of grain to furnish food supplies during the fall and winter.

The Game Commission is doing everything possible with funds which can be budgeted for this purpose in improving these conditions on the State Game Lands and Game Refuges. In order to be effective, however, the work must be carried on over all areas usable by wildlife.

During the fiscal year which ended June 1st, 1939, the Commission planted on lands under its control a million and a quarter evergreen seedlings to improve the cover conditions. Almost one million shrubs and vines which produce berries and fruit eaten by wildlife were also planted. Approximately one hundred and seventy-five thousand cuttings of wildlife food producing plants were set out. There likewise were six hundred and eighty-nine game food plots, with an area of six hundred and thirty-eight acres, planted to grains on Game Lands and Game Refuges. In addition to the grains planted there were 220 acres of State Game Lands farmed on a share basis by neighboring farmers for which the Commission received as its share approximately 5,000 bushels of grain for winter feeding of wildlife. Many other programs, including the pruning of wild apple trees, release cuttings, building artificial shelters, etc., were carried on largely by relief labor on the Game Lands and Game Refuges.

Many different kinds of shrubs and vines are valuable for planting for food supplies. A fairly complete list of these is given in the Commission's Bulletin 11, "More Food for Upland Game", which can be secured free of cost. Additional information is given in the Commission's Bulletin No. 16, "Wildlife in the Farm Program". These trees and shrubs can be secured at fairly reasonable prices from a number of commercial nurserymen.

The planting of clumps of trees, shrubs, and vines which provide cover and food in the form of berries, fruit and seeds should be carried on wherever this material is lacking or where it cannot be produced by protection from domestic stock, or by protection from mowing. The various conifers, such as pine, spruce, hemlock and cedar, provide good winter and escape cover. To be most effective, some of the species planted for cover should form a tangle, or be stiff and thorny, so that in cases of necessity, pursued game can find a safe retreat from its pursuer. Clumps of Japanese rose, sweetbriar, or hawthorn near plantings of conifers insure good cover and provide some food for game.

In arranging for the planting of areas, consideration must be given to a variety of species, selected in such manner as to provide a constant food supply during the entire year. In each clump that is planted there should be some shrubs or vines which produce summer foods and other shrubs or trees which provide food during the fall and winter. Some of the better ones to plant for summer food include the Virginia creeper, Juneberry, cherry, plum, elderberry, blackberry and mulberry. Selections may be made from the following for planting for fall and winter food: bittersweet, hawthorn, sumac, winterberry, snowberry, persimmon, viburnum, hazelnut, oak, walnut, wild grape, honeysuckle, mountain ash, crabapple, wahoo, dogwood and Japanese rose. In addition to providing food and cover for game birds and animals, they also furnish protection and food for song and insect eating birds.

Confucius say:

Hunters who send in game-kill reports on time save money.

Wise farmers leave some briars and brush grow for wildlife protection.

He who wants more game must plant food plots.

Protect forests from fire if you want trees and plenty wildlife.

Many farmers have found it advantageous to plant plots of one-half acre or more to evergreens for Christmas trees. If material of good quality is planted it is usually possible to harvest a part of them after the fourth or fifth year and still leave enough for production of timber crop. Strips of evergreens are also useful as windbreaks in sheltering buildings and orchards from wind. These strips, or plots, of evergreens are also valuable to wildlife as shelter, especially during severe winter weather, and as a place to escape from their natural enemies.

There is in most sections much valuable material for game food planting which can be transferred from fields where its removal is necessary to locations where it will benefit wildlife. Quite often there are also spots where there is an over-supply, part of which can readily be transferred to other places where it is scarce. Anyone interested in wildlife can very easily carry on such work, which spreads out the supply of food and cover for it.

In order that wildlife may have a sufficient amount of solid foods, patches should be planted to various cereals or arrangements made with farmers to leave food patches standing when their grains are harvested.

There are a great many grains, grasses, legumes and weeds which furnish excellent solid food for game birds and animals. Some of those suitable for game food patches are field corn, kaffir corn, buckwheat, sorghum, wheatland milo, sweet corn, broom corn, wheat, flax, millets, proso, vetch, sudan grass, sweet clover, sunflower, soy beans, cowpeas, and field peas. Climatic conditions in different parts of the State will govern the varieties to plant for farm game and wild turkeys in each section. In the March issue of the Game News there appeared an article describing the Pennsylvania Game Food Plot Mixture which is very good for planting for all farm game species.

Kaffir corn with a sprinkling of field corn furnishes excellent game food. Planting of buckwheat or millet broadcast at the last cultivation of corn provides desirable game bird food, while the corn furnishes both food and cover. Sudan grass in this mixture likewise is very beneficial in providing cover.

In any game food planting program it is essential to have the plots widely scattered. Plots or strips of one-eight to one-half acre scattered over an area are preferable to large ones. They should be rectangular in shape rather than square. Patches must be provided not more than two or three hundred feet from good natural cover, such as a woodlot, hedgerow, a brushy ditch bank, and arrangements made for travel lanes provided with good cover, in order that it will be unnecessary for game to be exposed to predators and inclement weather in reaching the food.

A considerable amount of soil erosion can be prevented by permitting a heavy growth of shrubs and briars to remain along gullied areas, stream banks, and in strips on steep hillsides. Where this material does not occur naturally it should be planted. These methods used in preventing soil erosion will, at the same time, be useful to wildlife in providing food and cover. Some of the plants which furnish food as well as cover, and at the same time also act as soil binders, are

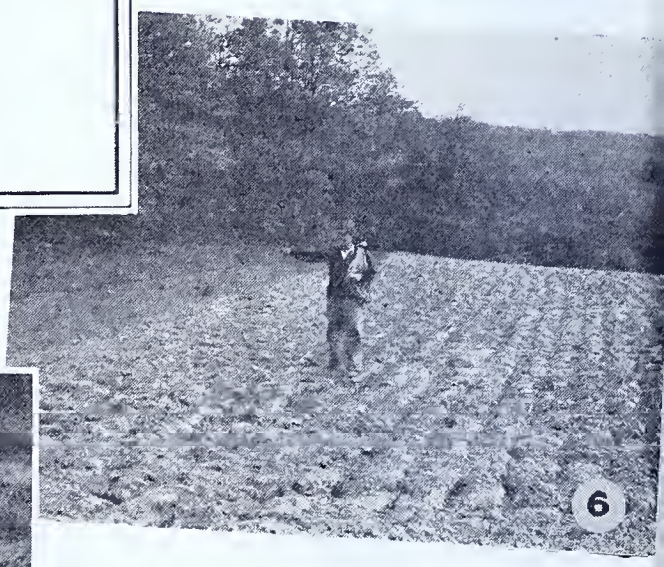
(Continued on Page 31)

L305750

HELP WILDLIFE
PROVIDE FOOD AND COVER

1. Bittersweet.
2. Wild Crabapple.
3. Wild Grape.
4. Winterberry.
5. Sassafras and Bittersweet.
6. Planting Pennsylvania Game Food Plot Mixture. Note: Proximity to good cover.
7. Temporary shelter can be provided for wildlife by piling branches from cut trees. Much deer browse is provided during winter by putting material of little commercial importance.
8. Lifting game food producing seedlings at nursery for transplanting on Game Lands.
9. N.Y.A. boys planting game food producing seedlings.

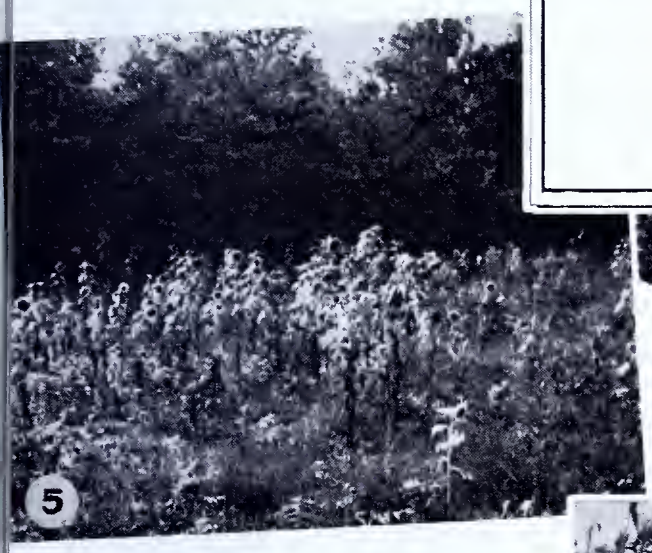
Right now is the time to provide for wildlife. Plant trees, shrubs and vines that will provide wildlife food and cover for years to come. Wildlife needs your help.



HELP WILDLIFE PROVIDE FOOD AND COVER

1. Wildlife Food Plot—Kaffir corn.
2. Wildlife Food Plot—Pennsylvania Game Food Plot Mixture.
   Rail fence built by W.P.A. labor.
3. Wildlife Food Plot—Prepared for seeding with Pennsylvania Game Food Plot Mixture.
4. Wildlife food and cover needed in such locations.
5. Wildlife Food Plot—Sunflower. Note: Proximity of good cover.
6. Wildlife Food Plot—Broom corn, planted in strips provides excellent food and good cover.
7. Wildlife Food Plot—Wheatland milo planted on Cooperative Farm-Game Project.
8. Wildlife Food Plot—Pennsylvania Game Food Plot Mixture—planted by sportsmen.
9. Wildlife Food Plot—Prepared for seeding with Pennsylvania Game Food Plot Mixture. Note: Long narrow strip and proximity of good cover.
10. Wildlife Food Plot—Pennsylvania Game Food Plot Mixture.

Plant a Wildlife Food Plot now, in order that birds and animals will not starve next winter.



Comments On Predation

By Hoyes Lloyd*

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Editor's Note: This paper, which covers some of the more recent opinions on this problem, was presented to the Provincial-Dominion Wild Life Conference for the purpose of opening and promoting discussion among the delegates.

THIS problem is as old as animal life on earth. Almost every species on the earth today evolved with enemies lying in wait. Predation is normal, not exceptional, and when man undertakes to tamper with what is normal as between one animal and another, especially when only part of the truth is understood he is starting a chain of events the results of which cannot be foretold and which will almost certainly be surprising and injurious to man's best interests.

If an abundant deer supply is desired for the chase, as in Scotland, say, and if wolves or other animals prey on the deer, it is the herdman's age-old instinct to begin by killing the wolves. Perhaps it does solve the problem for the moment, but when the wolves are killed off, or other measures that permit an unnatural abundance of deer are put into effect, the doom of the deer is sealed—they too must die. I am glad that Dr. Cameron the greatest authority on the Scottish red deer herds is here, and I know he will be glad to tell you how the deer of Scotland are proving this, and how they are deteriorating because of over population caused by the absence of enemies and by other artificial conditions. He says in "The Economic Importance of Parasitology:"

> "Artificial protection and the absence of all natural enemies except man, has permitted an enormous increase in numbers in the Scottish Deer Forests. The animals have decreased in quality and in size and parasitism is rife. Unless numbers are artificially decreased in the near future, that once magnificent animal is going to disappear completely."

Coming nearer home the Kaibab Forest, of approximately 1,052,000 acres, in Northern Arizona affords a striking example of the ill effect that can result from the killing of predatory animals. The predators were efficiently removed with the result that the deer in that area increased to such an extent that they literally ate themselves out of house and home. The situation became so grave that a committee was appointed to investigate and report on what should be done. The recommendation of the committee was that the number of deer be greatly reduced and held at a low level until the various species of shrubs and young trees upon which the deer subsist are re-established. The committee recommended further that all forms of natural wildlife, other than deer, be left undisturbed; also that the area be closed to trapping and the hunting of flesh-eating animals until adaquate reduction of deer are made.

A somewhat similar situation also occurred at Isle Royale in Lake Superior, which island moose reached on the ice from the Ontario mainland and where they were fully protected. Owing to the absence of predatory animals the moose increased to such an extent that there was not sufficient food for their subsistence and consequently they have been dying from sarvation. The Michigan Department of Conservation is now transferring a number of the surviving moose to the mainland.

New Zealand is affording a striking example of what can happen when deer are acclimatized in an area where there are no predators. In 1864 three European red deer (two does and a buck) were taken from the Royal Park at Windsor Castle, England, and liberated on North Island, New Zealand. They settled down in their new home and began to breed and thrive and they are now said to be larger than those of the original English Park herd from whence they came.

Captain E. V. Sanderson, President, New Zealand Native Birds Protective Society, Wellington, New Zealand, who was asked for any information he might be able to give with reference to the introduction of deer into New Zealand; as to what problems, if any, have arisen as the result of their introduction, and also for any information as to the enemies and diseases with which deer are confronted in New Zealand, replied as follows:

> "The initial experience was that the animals increased very fast, and the heads then obtained were probably unequalled elsewhere, as would be expected when such a plentitude of food was available, as then existed in our virgin forests.
>
> "Then came the aftermath; the deer increased so rapidly as to become a national menace of the first magnitude. The forests are now being destroyed, and most serious erosion has already been set up in some of our mountain districts. With the decreasing food supply, the good deer heads have become scarce, and difficult to obtain, despite the presence of hordes of deer in many places.
>
> "The leaders of the sportsmen here have intimated their inability to handle the menace, with the result that the taxpayer has had to shoulder the burden, but although numerous paid hunting parties are operating, a bounty being paid on all tails, and all protection has been removed, the natural increase cannot be kept within reasonable limits, owing to the extremely rough nature of the country, and mountain ranges. The only hope, both from a deer-stalker's point of view, and from a national prosperity point of view, is the introduction of the natural enemy, but this, again, would entail much loss to our very large domestic flocks, and is unthinkable from the view of the pastoralists. . . .
>
> "Perhaps the final solution will be that some domestic dog, like the Alsatian, will become feral. Man, although the most prolific predator, appears to be the most inefficient, when in the guise of the sportsman, even from his own view-point, he takes the cream of the male stock, and therefore reduces the stamina of the herd. On the other hand, the well-equipped predators, such as wolves, tigers,

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*Director, National Parks Branch, Dept. Mines and Resources, Ottawa, Canada.

THE SKUNK LINE

by S. V. Sedlak

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THE skunk is the most common and well known of all our fur-bearers, and perhaps the most misunderstood. He is disliked because of his odor, or because of some slight depredations he may commit. He is killed by sportsmen, farmers and automobiles. Yet with these and many other dangers he holds his own in most localities.

In Pennsylvania the skunk is the main fur-bearer of sideline trappers and I am writing this article for the benefit of beginners.

The trapper, whether amateur or experienced, usually has a difficult time on account of numerous trap and fur thieves. Some of these thieves are rather canny and the trapper has to devise cannier tricks to outwit them. Different trappers have many different ways of fooling these "sneakums". I will tell of some of mine. I make my sets in hidden places and at others I camoflauge the sets well to conceal them. During the summer sets can be prepared and brush fixed around the locations so the traps aren't so likely to be noticed by passersby. When baits are used they should be concealed by leaves, etc., so as not to be noticed easily.

A good scent is a big help in trapping, because one needs no bait. Furthermore, sets at which only scent is used aren't likely to be molested by thieves because they aren't easily noticed. When snow is on the ground I take a few jumps to my set location, fix or look at the set and then with an evergreen bough brush out my tracks as I back up until I reach the spot from which I leaped; then I keep walking so it will appear to anyone as if I had just walked along, yet the set will be a few yards off my regular trail. The best way to deal with thieves is to have them arrested if you can get enough evidence on them. You can obtain the services of your nearest game protector in such cases.

On account of his various colorations the skunk is divided into four main groups according to the amount of white his fur contains, such as black, short stripe, narrow stripe, broad stripe. The black skunk may have a white spot on his head or neck, or may even be classed as a black if the white reaches the front shoulders. However, fur buyers differ concerning this. The short stripe has a white stripe as far as the middle of the back, or farther, so long as it isn't a continuous stripe the length of the whole body.

The narrow stripe has a thin stripe of white across the whole body and tail, while the broad stripe has a broad stripe of white along the whole fur or almost completely white. The value of skunk pelts are in the order I have given the different grades, with black the highest and those with the most white the lowest in value.

The skunk's unique method of protection is well known to most persons. When molested it turns, raises its tail towards its attacker and, at the right moment jerks its body upward a little and expels a little stream of powerful musk for a distance of about ten feet more or less. The color of this musk is a greenish-yellow. The musk bag is located on the under side of the body at the base of the tail, and the tail has to be in the air before it can expel its secretion any distance.

I have experimented quite a bit with skunks and find that one can walk right up to the animal if one is careful. Take a few steps and if he raises his tail, stop until he lowers it, then approach a few more feet, and so on. Skunks nearly always throw their musk when dispatched from a trap, regardless of the method used. Sometimes after a rain, when the skunk is quite thoroughly soaked, he seems unable to discharge his musk.

Most trappers dispatch trapped skunks by either clubbing or shooting. I use three ways, depending on conditions. If I have a lot of my line to look at, and not much time, I shoot them with my .22 calibre rifle in one of their ears, which I think is about the best spot. If I have enough time and there is water a few feet deep near the trapped animal I simply take hold of the fartherest end of the drag and haul him to the water real fast and drown him. The musk he throws will be washed away. If I find a skunk caught in a rather open location I use a wire snare on the end of a long, stout pole, about the size of a clothes line pole. I carefully approach the animal with the snare toward his head and very quietly slip the loop around his neck, then quickly lift him into the air and hold him there until he is dead. You have to be mighty careful in doing this, and if the skunk keeps his tail between you, circle around until you get a chance to put the loop over his neck.

Because I am a sideline trapper I like to use such scentless methods of dispatching skunks as drowning or hanging; however, when in a hurry I use the .22 rifle and believe it most practical for "skunkers" to use. You can avoid getting musk on your clothes if you are careful. If there is a wind blowing you should always stay on the windward side of the skunk; that is, the wind should hit you first before it reaches the skunk. If the wind blows from the skunk toward you, it will carry the musk a long distance.

The skunk generally prefers to live and travel around small settlements, farms, and such semi-wilderness country, and is scarce in the forests. The reason for the abundance of skunks around towns and farms is probably the abundance of food. He is a great grub worm digger and eater which can easily be noted by the many conical holes in the ground around fields, pastures, stumps, etc., in skunk infested locations. Skunks are really beneficial and not destructive to farmers. Rarely do they kill chickens, rabbits, birds, etc. Many times I have seen them around chicken coops and chickens at night without harming them. Oftentimes weasels or dogs kill chickens and the skunk eats the chicken and gets the blame for killing it. Skunks often live under barns, chicken coops, houses, etc., without doing any notable destruction.

In order to trap skunks one should know the proper locations for sets. Places that skunks frequent are proper places to set traps. Along the edges of fields, brush grown fences, orchards, old outbuildings, gullies, garbage dumps, and along road ditches are some places most frequented by the animals. I especially like to set traps along fences grown with brush, or near a few apple trees or stump rows along or between cultivated fields. Such locations usually mean catches and are easier than most places to run a trap line.

It is the best policy to run the trap line in the general form of a circle, oval or such, so as not to cover the same ground twice and to take in more territory. By doing a lot of prospecting during the summer and fall before the season opens the trapper can be all prepared for a good fur harvest and

(Continued on Page 29)

Members of the Committee whose painstaking efforts Contributed much to the success of the program.

WILDLIFE FEEDING CARAVAN

By A. J. HANES

THE pages of history covering wildlife in Pennsylvania had a new chapter written on Sunday, February 25, 1940. On that memorable date, the largest feeding caravan ever to assemble swarmed over the snow clad hills of Elk, Cameron, and Jefferson Counties to participate in the most extensive wildlife feeding program ever undertaken. St. Marys will long remember this date as one of the busiest it has ever seen. From early morn until late at night the Temple Service Station, owned by C. P. Harvey, was a bee-hive of activity, and acted as the clearing house for this army of sportsmen. Long before the arrival of the main caravan from Allegheny County, sportsmen from all walks of life and from all parts of western and southwestern Pennsylvania began to arrive, ready to do their bit towards preserving the spark of life in the emaciated and starving wildlife, especially the deer herd, which at present is in dire circumstances.

Among the early arrivals was the contingent from Jefferson County accompanied by the Kramer Band. Also large delegations from Johnsonburg, Ridgway, Byrndale, Weedville, and Force in Elk County. Bill Munsell from Cameron County and his committee were on the job early, ready to lead the Cameron County contingent to Emporium upon their arrival. Two hundred sportsmen from St. Marys were on hand to greet all visitors and assist in making them feel at home. The St. Marys Band volunteered their services and entertained the large crowd at the Service Station awaiting the arrival of the caravan.

The caravan, numbering many large busses and private cars, arrived at 10:15 A. M., and was met at the Ford Garage by the Kramer Band, who escorted them to the Service Station to the tunes of lively march music. Arrived at the Service Station, the caravan was greeted by the general committee for Elk, Cameron, and Jefferson Counties. Upon entering the Service Station, each man was given a card to register his name and address, and then was treated to hot coffee, brewed by one of St. Marys' famous coffee makers, "Len Henry", and served by a troop of Boy Scouts. The serving of this coffee was made possible by the St. Marys Sportsmen's Association and through the generosity of C. P. Harvey, H. C. Stackpole, H. B. Eynon, and the Stackpole Carbon Company, who made substantial cash donations to the local sportsmen for this purpose.

The G. C. Murphy Stores and Kantar's Department Store donated china cups for the occasion. The Mullendean Hotel, Central Restaurant, and Crystal Fire Department donated coffee urns, and the Elks Club furnished the necessary tables. The Fire Department also permitted the use of their loud speaking apparatus, which in no small measure contributed to the ease with which the large crowd was handled.

Mayor C. J. Fehrenbach of St. Marys, in an address to the assembled sportsmen, extended welcome greetings and praised them for the fine spirit of sportsmanship shown on the occasion. A. J. Hanes, Chairman of the North Central Division of Federated Sportsmen, extended greetings on behalf of the local sportsmen and then turned the loud speaker over to the "General" of the day, M. E. Sherman, Field Supervisor of Division "E" of the Game Commission. He immediately began to dispatch the various units to their fields of activity.

Bill Munsell with the Cameron County division was the first to depart, followed shortly by the Jefferson County unit, headed by Amos Knarr, General Chairman for that county. The Ridgway unit, headed by C. P. Paddock and G. H. Austin, soon had a delegation of 180 men headed for the Allegheny National Forest in the Mill Creek Section. Charles Ion and his Johnsonburg crew, and M. L. Scott and Ben Haskins of Jay Township, followed in very few minutes.

St. Marys sportsmen, headed by Fred Mullen and Raman Dippold, were soon busy picking up the remaining visitors, and in less than one hour after their arrival, all men were on the way to the forests. The Service Station and town were desolate of sportsmen until late afternoon, when the treck back home began and the last contingent left St. Marys at 9:00 P. M.

Sportsmen found conditions in the woods pitiful, with deer in a starved and undernourished condition and snow three to four feet deep. Some deer were found dead, victims of the hard winter and scarcity of food. One sportsman, in trying to assist a weakened deer, had it die in his arms. Others found that upon returning to cuttings they had made early in the day, deer were eating the tender twigs and paid little or no heed to sportsmen who ventured close enough to take pictures.

Many thousands of aspen, soft maple, fire cherry, and other small trees were felled by the sportsmen and will furnish considerable browse for deer during the next several weeks when it is needed most. Hundreds of apple trees were trimmed and pruned, in order that they may furnish better fruit in coming years. Limbs and tender branches of the apple tree are relished by deer and small game.

Tired but happy in mind, the visiting sportsmen were high in their praise of the treatment accorded them on all sides by local sportsemen and town people. All were more than satisfied that the venture was a proven success, both from the standpoint of creating a better feeling among sportsmen and in assisting wildlife during this critical period. Plans were laid for another caravan

of a similar nature next winter, and every man present signified his intention of being numbered among the boys next year. Approximately 1,700 sportsmen registered at the Temple Service Station, including men from Allegheny, Fayette, Erie, Indiana, Armstrong, Westmoreland, Washington, Clinton, Clearfield, Beaver, Clarion, Mercer, Crawford, Lawrence, Jefferson, Cameron, and Elk Counties. They represented sportsmen from more than 125 towns and cities in Pennsylvania.

Prominent visitors and leaders in the sports world included Harris Breth of the Pittsburgh Sun-Telegraph; Johnny Mock of the Pittsburgh Press; J. N. Morton, Chief of the Division of Land Management of the Game Commission; Leo A. Luttringer, Jr., in Charge of Public Information for the Commission, and William L. Drake, his assistant.

The success of the caravan was due to the hard work of the committee from the various sections and the cooperation of the sportsmen. The General Committee for the Allegheny County Sportsmen's League and other southwestern counties included Harry Depp of Crafton, as General Chairman, assisted by such well known sportsmen as Peter Krass, Charles Gerlach, Dale Irons, A. E. Bittner, D. A. Stuart, Ralph Liphart, and William Guckert. In Cameron County, William G. Munsell, General Chairman, was assisted by Stanley Priest, Lamonte Kreider, J. B. Hayward, and other prominent sports leaders. Amos Knarr of Reynoldsville, and J. H. Barkley, Vice Chairman of the North Central Division, had charge of affairs in Jefferson County.

For Elk County, Robert Jacobs of Johnsonburg, President of the Elk County Sportsmen's Association, was General Chairman, assisted by Charles Ion, President of the Johnsonburg Club, G. H. Austin, President of the Ridgway Rifle Club, C. P. Paddock, Secretary of the same organization, Fred Mullen and Roman Dippold, President and Vice President of the St. Marys Sportsmen's Club, E. J. Hammer, past President of the County Association, M. L. Scott, President of the Jay Township Club, and C. R. Anderson and Ben Haskins of Jay Township.

In addition to these local committees, other prominent men who served on the general committee and assisted in coordinating the affairs were: M. E. Sherman, Field Supervisor, Division "E", Game Commission; Rollin Heffelfinger, Field Supervisor, Division "G", Game Commission; A. J. Hanes, President, North Central Division Federated Sportsmen; L. G. Barnes, District Forester of Emporium; R. F. Hemingway and staff of Allegheny National Forest District.

A vote of thanks is extended to C. P. Harvey, owner of Temple Service Station, for the use of the service station and parking lot; Len Henry, coffee maker, for his splendid services; the Boy Scouts for their great assistance; the St. Marys and Kramer Bands for their cooperation; merchants who donated coffee and foodstuffs for use in the woods.

PROGRESS REPORT

County	No. of Men	Average Hours Worked	Total No. of Hours
Elk	800	3.1	2474
Cameron	250	3	750
Jefferson	100	3	300
Totals	1150	3	3524

Number of Trees Cut and Pruned

Aspen—
Elk County, 15,991, Cameron County, 8,000, Jefferson County 2,000, totals, 25,991.
Cherry—
Elk County, 7,973, Cameron County, 3,009, Jefferson County, 500. totals, 11,482.
Soft Maple—
Elk County, 11,406, Cameron County, 6,000, Jefferson County, 3,500, totals, 20,906.
Other Species—
Elk County, 10,925, Jefferson County, 500, totals, 11,425.
Apple—
Elk County, 836, Cameron County, 604, Jefferson County, 25, totals, 1,465.

It will be noted that the species of growth cut or pruned were generally of the type classed as inferior forest growth when compared with species that produce lumber. A number of the above mentioned species of forest growth, you will note, were trimmed or pruned, so as to permit them to develop a more abundant fruit growth for the wildlife.

You will note that we have tabulated from the records submitted 1150 men. This does not register with the registrations submitted at the central assembly point. To cover this discrepancy, however, we feel certain that many of the men departed in their automobiles and did not return to submit reports covering their activity. We have made no allowance for whatever activity along the above lines they might have performed.

Photos Courtesy Harris Breth

CURRENT TOPICS

IN MEMORIAM

Loyalty, integrity, and devotion to duty which manifest itself even unto the end marked the untimely passing of one of the Commission's most beloved employees and one of the sportsmen's best friends.

"Frank" was an inspiration to everyone who knew him, whether that person was one of his closest friends or whether he was the defendant in a case which it was his duty to prosecute; sincere, kind, "above board" in all his dealings with his fellow men he won a respect and admiration that few whose duty it is to uphold the law have ever been accorded.

He knew his duty, and he did it, fearlessly, willingly. He played the game according to the rules governing the game, and he was ever trying to improve the rules so that the game could be played better. He loved to hunt and fish because it brought him into contact with the things which were akin to his spirit.

FRANK MYERS

He accepted no advantage and desired no privilege. In the words of Rev. Darlington R. Kulp, who invoked the final homage to our beloved comrade of field and stream, "The finest tribute that we can pay to our friend is to live worthy of the example that he has set for us."

"Frank" entered the service of the Commission on May 21, 1920, as District Game Protector of Blair County. He was promoted to Division Supervisor of Division D on May 1, 1924, with headquarters at Lewistown. Later he was transferred to Shippensburg, Cumberland County, and still later was appointed Supervisor of Division A with headquarters at West Reading.

He was 57 years old when he passed on to his final reward on March 9, 1940, and is survived by his widow and three daughters, to whom the entire personnel of the Commission and his many sportsmen friends extend the deepest sympathy.

NOTES FROM THE FIELD

"On February 9 Postmaster H. W. Bender, of Muncy Valley, turned over to me a dead cardinal which Rural Carrier B. Laurenson and himself saw killed by a starling. They saw the birds fighting from the Post Office window and the starling succeded in killing the cardinal on the ground. The starling then grasped the cardinal and flew up into a tree with it, held it a little, then dropped it. The men then went outside and picked it up. The bird's neck apparently was broken."—Game Protector Robert E. Latimer, Sullivan County.

"Never in our experience did we find conditions for game as bad as they were in early March near our hunting lodge in Pike County. We made many feeding excursions all the way from Philadelphia in blizzard, snow and ice, and as much as tripled our appropriation for game food, which was taken into the woods on toboggan sleds and placed in the feeder boxes. A constant vigil was necessary to keep clear of ice-laden tree limbs that were continually falling around us."—William C. Kramer, Secretary, North Philadelphia Hunt Club, Philadelphia.

The boys of the Port Allegany Junior High School get out their own sportsman's paper —a clip sheet known as the "Junior Sportsman Reporter." The editor is Charles Boller, Jr., whose father is editor of the Reporter-Argus, of Port Allegany. The managing editor is John Coneys, and Bob Dardene is the reporter.—Mrs. Bertha H. Helmer, Port Allegany.

"What I believe to be a record beaver was caught this past season on the 26th of January in Maple Creek, Barnett Township, Forest County. The beaver weighed exactly 82 pounds according to the scales at Mr. C. S. Cook's store at Clarington. I have Mr. Cook's word that this is the correct weight. This beaver was trapped by Russell W. Motter of Clarington, Forest County, Pa."—Vern A. Van Order, Game Protector, Forest County.

Two Indians in full regalia hunted deer with the bow and arrow last season on the State Archery Preserve in Sullivan County, according to E. W. Carpenter, Game Protector in charge of the Game Refuge in that district. One of the Indians "Chief Running Water" gave his age as 75 and his residence as Harrisburg.

FRANK PLESSINGER RETIRES

Junior Game Land Engineer, Frank P. Plessinger, having reached the age of sixty-five years, retired from service on March 5, 1940.

Mr. Plessinger was placed on the salaried payroll of the Commission as a land surveyor on August 16, 1929. From that time until his retirement, he surveyed the boundary lines of many thousands of acres of lands which the Commission had agreed to purchase, and which are now a part of the magnificent system of State Game Lands totalling 622,961 acres.

He is well known throughout the Commonwealth and has a host of friends. He was at all times thoroughly loyal, faithful, conscientious and very efficient in his work, and the Commission sincerely regrets losing his services.

Mr. Plessinger was born and reared at Amaranth, Fulton County, and still resides there. He is a registered land surveyor and will continue that line of work. Because of his knowledge of land lines and corners throughout the Commonwealth, and of court house records, it is expected that his services will be much in demand by private interests.

LOST OR STOLEN

STRAYED OR STOLEN—Young female beagle; height twelve inches. White underneath body and on legs, chest, and end of tail. Black markings over back and shoulders. Brown over head and ears. Owner's name on collar at time of disappearance, but no license. Lost in vicinity of Weiss Library or near Townline road, Erie County.—Vincent E. Barnette, 2959 Maple Street, Erie.

LOST—Male Beagle answering to the name of "Buck"; 13½ inches high; lost on February 20 in Carnegie, Pa. Black and white with a tan face. Reward.—Sam Catanese, 308 Lincoln Avenue, Carnegie, Pa.

FOUND—Pointer dog, near Irwin, Pa. Contact Dr. R. K. Boyer, Pitcairn, Pa.

STOLEN—One single and one triple Western target clay pigeon trap, pit mounting, and approximately 200 Western clay targets from the West Fairview Rod and Gun Club headquarters, West Fairview, Cumberland County, Pa. Notify the Game Commission.

LOST: One male Fox Hound, white with some black spots on back. Left front ear split. When ear healed it did not heal straight and it laps over. Seven months old. Was wearing collar of older dog with license and name plate on it.—Charles Severe, Moscow, Pa., R.D. No. 3.

FIELD TRIALS

The Lehigh-Northampton County Raccoon Protective Association will hold a field trial for all 'coon dogs on Sunday, May 5, on the Ed. Hess Farm at Seemsville. Turn off Route 145 between Northampton and Bath. $100.00 final guarantee; $2.50 entry fee.—Franklin H. Minnich, 217½ Madison Street, Allentown.

CURRENT TOPICS

SPRING RESTOCKING

Game coverts throughout the State were replenished with almost 70,000 game birds during the past few weeks. Over 50,000 ring-neck pheasants, 700 wild turkeys, 750 Hungarian partridges and 500 chukar partridges, held or purchased for Spring release, were turned loose on the unposted hunting territory throughout the State, and approximately 17,000 quail will be liberated in late March and early April.

Included in the pheasants scheduled for release were over 6,000 birds raised on a co-operative basis by sportsmen's organizations from six-week old birds supplied to them last summer by the Commission, half of the birds so raised having been released by said organizations last fall.

This is the largest Spring release of game birds that has ever been made in the State, and the Commission believes that under its recently expanded program this new high can even be surpassed in future years.

REGISTRATION PLAN ADOPTED

The plan of dog registration as a protection against theft which has been tried out by the Consolidated Sportsmen of Lycoming County has been approved and made state-wide by the Pennsylvania Federation of Sportsmen's Clubs.

Carl Rosser, Williamsport, who has been in charge of registration for the Lycoming County organization, was chairman of a committee appointed a year ago to study the plan and judge its desirability as a federation activity. Dr. C. A. Mortimer, Wilkes-Barre, and A. R. Deeter, Reading, were on the committee with him.

Dogs Numbered

The basis of the plan is the permanent numbering of dogs by tattooing numerals in their ears. The method is quick and humane. In order to facilitate identification of lost or stolen dogs, the system of county numbers used in distributing hunting licenses will be followed. For instance, Lycoming County being No. 41, a dog registered in this county would be marked "41 - 123".

In addition to such marking, the system involves indexing of pertinent information, such as the breed, sex, age, name and distinctive markings of the animals.

In the event a dog is lost, an immediate requirement will be an advertisement by the owner, giving the information contained on his dog's card. The county registrar will report the disappearance of the dog to the S. P. C. A., State Police barracks, district game protectors, secretary of the state federation, county treasurer, Game Commission, the state publications of the Fish and Game Commissions, and other sportsmen's magazines. In Lycoming County, every lost or stolen dog reported during the past three years has been found. Over 250 dogs are registered in the county so far.

Fee Is $1.25

A fee of $1.25 will be charged for registration to meet the expenses of operation. Dog owners need not be members of an organization to avail themselves of the registration service. While the plan is primarily for hunting dogs, owners of any types of dogs may make use of the service.

Off for a new home and liberty.

Photo Courtesy Williamsport Grit

Carl Rosser, left, and Dalton Bell, Vice-President, North Central Division of the Pa. Federation of Sportsmen's Clubs, registering a dog.

Twenty-four additional cooperative farm-game project agreements were completed during January. These were additions to six projects previously set up. Cooperative Farm-Game Projects now total 1,606 farms, comprising 133,042 acres.

The Commission, at its meeting January 11, considered the wisdom of enlarging the acreage of these projects, and decided to authorize enlarging certain of the small-sized desirable project areas, but not to establish new projects for the present. An analysis of the program cost is being made, after which the Commission will decide its future course.

"Model feeding shelters, rabbit retreats, pole and basket feeders are being built along the 8 foot trail leading from the Museum to the Parking area, with the thought in mind that some of our visitors may take the idea home with them."—Game Protector Burt L. Oudette, Crawford County.

"On February 9, I checked food plot on Game Lands 88, which was planted to Pennsylvania Mixture, and found that grouse are feeding on it quite a lot. Rabbits are also feeding on the plot, although there are not many rabbits in that vicinity."—Game Protector Harold Russell, Perry County.

BEARS

By GEO. R. SAGE

You hang on with everything you can.

THE inspiration to write this story came to me the night a few of the boys and myself were gathered at the home of a neighbor and fishing pal of mine, who at the time, had a relative visiting him from the City. This nightly assembly of ours was a ritual with us after the close of the season. Here we took turns killing each piece of game over again.

Everything would have been fine if my friend's guest had not brought up the subject of bears. He didn't know of course that the word bear was strictly taboo in my presence. But the damage was done and a deathly silence descended on the room, with me being the object of hostile stares from every man there except our visitor. What they expected was to come, of course, because the subject of bears is to me what the honey is to the bee, and since we had killed one the season before, wild horses couldn't hold me back from pouring that story into ears that hadn't heard.

When he said, "Well how about the bears up here"? I snapped out of my lethargy, leaped to my feet and said, "What's that you say? "Bears up here! Sure we have. Here, friend, sit down where you will be comfortable and let me tell you about the one we killed last year." Whereupon the rest of the boys with sighs of resignation arose and started for the next room, deciding in favor of pinochle rather than mayhem. But as a parting shot, the last one disappearing through the door said, "Why don't you write him a letter?"

That remark gave me the idea. Why not write it, tell everybody and get it off my chest once and for all. And so friends I give it to you as told to him, in the hope that you will not deal too harshly with me because there may be some basis for that whispered remark among the boys about somebody being bear happy.

"What's wrong with them?" my friend asks. "Oh, don't pay any attention to them. They're a little sore about me refreshing their memories on the high lights of that kill a little too often. But you ask about the bears up here. Why we have enough bears in the upper tier counties to make the game worth while, but it's no game for a panty waist or for anyone who gives up the ghost quick. We have about six hundred thousand hunters in this State, with a yearly kill of between four to six hundred bears. Well, you figure the odds.

"Of course all these Laddies don't turn out for the short season we've had lately, but if you get to see some of the hot spots on opening day you'd have trouble counting all the cars they come in

Since the dogs have been outlawed the routine is just about the same for all the would-be bear hunters. You bat around the ridges and sides of some of the darndest, highest mountains you ever saw, and in some places you hang on with everything you can hold with, including your teeth. Well, after merrily traipsing up and down these babies for about five or six seasons, and if you'd found a couple of horseshoes, been unlucky in love, you might get to see a bear. And buddy, when you do get your chance to crack down on one of those almost mythical creatures, you want to tell somebody about it. Chances are it will be some dumb way you hadn't figured on nohow. At least our kill was flukey enough.

You see, Al, Larry, and myself, they're my bear hunting pals—have been going up to Sullivan county for the first two or three

Al carries enough equipment to weigh down a pack horse.

days of the season for the past few years, and last year was the first kill we made. Now when I say our kill I mean Al actually killed the bear, but we all felt so chesty about it we just call it our kill.

Since the honors go to Al, I'll tell you about him. Al is a queer sort of a duck, never leaves anything to chance and carrys enough equipment to weigh down a pack horse. But don't get me wrong about Al. He may look a little like a cross between a tin peddler and a walking arsenal when he takes to the bush, but if we get lost, need a match or a change of socks, we don't do any kidding then. He rolls his own for that '06 of his and when that thing barks you generally can make up your mind to help carry something in.

Then there's Larry. While I'm about it, I'll give you a line on him. Larry's one of those tall, quiet angular lads, who's mostly all elbows, knees and angles of some kind. When you first get to see Larry you get a vague impression in the back of your head of a loose sack of scrap iron. But don't let him fool you none either, for when the day is done and that rear portion of your anatomy is just about three inches from the ground you'll find Larry standing off somewhere gazing reluctantly at some distant peak. If you happen to spend a day with him, you'll also believe he's made of iron.

Well, to get back to my story. We went back up there last year and just a short distance above a half deserted place called Jamison City we pulled in and prepared to spend the night. Our intentions were to sleep in the car and hunt that valley the first day, then go back to a friend's camp near Lopez the last two days of our stay. We're just about comfortably seated with a small fire going when an ancient bus comes up the road and stops opposite our fire. What we figured to be another party of hunters, turned out to be a bewiskered native pretty well oiled. He wobbled over to the fire, and with a "Howdy boys!" sat down and plunked a gallon jug between his legs. After trying to focus us individually, he shook his head sadly and said, "Ya kin all have a drink anyway"! We all politely declined and that seemed to hurt him. "G'wan he says, it's only cider."

Well Larry, he elects to take a drink just to appease the old fellow. As he held the jug to his lips I saw his adams apple bob once, his hand give a convulsive jerk and buddy, you never saw a man move any faster in your life. Larry was on his feet in a split second and promptly decided we needed more wood. Our tipsy visitor got a big kick out of that, but it did put him in a better frame of mind and after he got done laughing he says, "Well boy'sh I reckon you're up to git your bear tomorr'er and iffen I had more time I'd tell ya a story or two about this section, but the Old Woman's gonna raise the roof if I don't soon git home." "But listen boy'sh, he says, "I'm gonna give ya a tip before I go. Don't stay in here. There'll be that many hunters in here tomorr'er you're liable to git tromped on. Now iffen I were youse I'd go back yonder here

"Listen boy'sh, he says, I'm gonna give ya a tip."

LISTEN!

★

a piece and ya'll find a road to the left crossing the crick; foller that and it'll fetch ya directly across from here. From there ya kin go back up five or six miles with your car. Might be just a little bit rough but I reckon ya kin still git over it. Go back as fur as ya kin anyway. And when ya git up there climb out on a ridge and just stand pat."

With that piece of advice ringing in our ears the stranger climbed in his car and left. "Drunk as a loon," says Al. Well I had been thinking this over and it didn't sound so bad, so I says, "Listen boys, drunk or sober these old timers generally know what they're talking about. If we can go back up there a good piece, it stands to reason if this place is going to be alive with hunters and we're already up there, we got a good chance of getting a look at any bear these fellows might stir up." So we talks this thing over and the more we say the better it sounds. In the end we decided to try it of course.

I won't bore you with the details of that ride over a road that was never meant for automobiles. Suffice to say when the old fellow said it might be a little rough, he either had a better charge on than we thought or he lacked imagination. It was plenty rough. But we did manage to get up there about four miles. And brother, between the ride we had and moving boulders to get the car off the road, just in case there might be some darn fools like ourselves who might try to come up there, we were plenty tired and more than anxious to turn in for some much needed rest. I'm just about dropping off to sleep when I hear Al say, "It was pretty tough but it might be worth it; at least we'll be alone and in no danger of getting 'tromped' on."

Well pal, you can appreciate my surprise when the sound of voices coming down the road, down the road mind you, awoke me in the morning. "Hell", thinks I, "nobody passed us during the night or I would of heard them". So I sit up for a peek out the rear window and bust me buddy if there weren't four dim figures, cigarettes glowing in the dark, coming down the road. It took me about five seconds to boil out of there and demand to know in no uncertain terms, where in Hades did they think they were coming from! You know how you feel when you sleep in a car overnight? Well, you look just twice that bad. I guess I didn't cut a very pretty figure when I jumped in front of those fellows because the spokesman of the group stuttered badly when he said, "Why j-just off the highway back here a piece." "Highway- Where?" I yelled. "Back the road here about a hundred yards. Is there anything wrong?" he asked. "No, no, there's nothing wrong friend. Thanks."

And bust me if there weren't four dim figures.

When those fellows filed past, they looked me over pretty close and I couldn't altogether blame them. By this time Al and Larry are out of the car demanding to know what all the fuss is about. After I told them, we're a badly disappointed trio of hunters, no doubt about that. We learned later that the highway is the road to Lopez from Redrock and we're parked just a stone's throw off it. Well, we're there and there's nothing we can do about it, so we decide to make the most of it and stay where we're at.

There he was standing on a big log.

There's no use of me giving you the details of our hike around them tops during the morning; it was just a repetition of seasons gone by. We separated and agreed to meet back at the car about three o'clock. Well, I busted around up there kicking in windfalls, throwing rocks in the holes along the rock ridges and just standing around hoping for something to happen. Its no go, so I heads back to the car. When I get there Larry's already in and Al straggles in shortly after. The story's just about the same with them, although they heard some action they weren't near enough to take part in any of it.

We're sitting there eating our lunch and gloomingly going over the events that had transpired since the night before when a small pickup truck comes bouncing in the road from the highway and screeches to a stop beside us. A bug-eyed laddie pops his head out of the window and yells "Started a bear on the other side of the mountain. Keep your eyes peeled. He was headed this way when we last saw im!" Then with wheels spinning and gears clashing he bangs down the road.

I finds Al up there the bear at his feet.

Al, he groans as he gets to his feet and says, "Hell, why does everything have to happen to us?" "No use passing up any bets, says I. One more bum steer more or less can't do any harm." So Al, he picks himself a spot up along the ridge and I goes over to the car to pry Larry out. "Come on." I says, "there's a bear on the move, stir your stumps Buddy." Well, Larry he's pretty sot in his ways you know, one thing at a time for him. When he hunts, he really hunts and the same goes for his eating, so he says. "I ain't done eatin' yet," and sweetly adds, "Was the kindly gent sober you was talking to!" "Okay, okay," I says. I see there's no chance of getting him out of there for the time being anyway so I leaves him there mumbling something about Old Timers knowing their stuff and starts down the road.

I goes down to where I had seen a jumble of rocks on the left of the road from where I can see a good hundred yards on both my right and left. It's just a little rise up and over the top and fairly open. I figure I'm in a pretty good spot to get a looksee if bruin comes over.

I'm standing there about fifteen, twenty minutes amusing myself, aiming that smokepole of mine on black stumps and imaginary rock bears, just about the stage where you forget the business at hand and start dreaming. Then suddenly, I'm wide awake, stiff and alert. I had caught a slight movement out of the corner of my eye. I turns my head slow like so's not to scare whatever I had seen.

Now look pal, I don't claim to be a second Daniel Boone, but on the other hand I don't figure I'm afraid of a little old two hundred pound black bear, but that darn bear's appearance was so sudden and ghostlike that for a moment you could have chopped the goose bumps off me with an axe. There he was about forty yards in the bush standing on a big log looking as big as the side of a house and staring me smack in the face. I'll never tell you how he got that close without me seeing him for I don't know.

Well, I don't get no chance for a shot then, because about the time I turn around he

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WITH THE CLUBS

Members of the Izaak Walton League build and repair wildlife feeders in the basement of the home of Clayton Henry, Jr., 2220 E. Boston Ave., Philadelphia. Left to right are George Keen, Paul Lupke, Burt Leeds and Henry.

Photos Courtesy Philadelphia Evening Public Ledger

The feeding station is replenished with corn and other grains by men in the foreground. Those in the background are camouflaging the shelter. The man at left is nailing a wooden feeder on the tree.

For ten years the Palmerton Rod and Gun Club has been spending hundreds of dollars annually for the purchase and stocking of rabbits and pheasants on open hunting territory. Three years ago the club cut these expenditures in half and began purchasing and planting trees. The trees are given to local farmers and the club members and Boy Scouts help to plant them.

In 1938 the club purchased 56,000 trees; in 1939, 40,000; and it has just placed an order for 50,000 for 1940. This will make a total of 146,000 trees planted on 146 acres. The average planting is from one to two acres, and the program has been adopted as a permanent annual project of the organization. The club also planted many hundreds of willow trees along about eight miles of the Aquashicola creek.

The Greenock Sportsmen's Association stocked 300 cottontails and many pheasants last year. Members have been feeding game for the last three months, and have distributed about $150.00 worth so far.

The Crawford County branch of the Pennsylvania Sportsmen's Council is campaigning for 3,000 members in 1940. Last year the association, one of the oldest in the State, had 1,900 members.

FARMERS REWARDED

The Ambridge District Sportsmen's Association extends honorary membership to over fifty farmers. In accordance with the Association's request these farmers have not posted their lands against hunting. A year's subscription to the Game News is also one of the club's gestures to retain their friendship. Arthur J. Brutout, Secretary, says: "We are giving some thought to the possibility of a small game refuge. At the present time we are endeavoring to form a junior organization. The juniors already have their officers and are now trying to get more members. There is to be a bird house building contest, and we feel that these boys can do much in the way of winter feeding, etc., with competent senior members to guide them. We are purchasing rabbits to supplement the restocking of the Commission. So, we think we are trying to do our share."

More than 500 men, women and children attended the Sixth Anniversary and Ladies' Night program of the Branch Valley Fish, Game and Forestry Association at Perkasie, recently. Crowded into the busy evening was the regular business session, the awarding of prizes in the "biggest fish" contest for 1939; committee reports on the year's activity; a two-hour program of interesting vaudeville entertainment and an informal lunch in which the entire group joined in "dunking" doughnuts in hot coffee to conclude the most interesting session in the history of the club.

Paul Myers and Freeman Fox both qualified for two prizes in the "big fish" contest. The former was credited with a 27-inch walleyed pike and a 14-inch yellow perch. Fox, with a 16-inch calico bass and a 17-inch rainbow trout likewise walked away with two prizes. Other awards were: Byron Effrig, 19¾-inch sucker; Earl Frankenfield, 29-inch carp; Leon Pflieger, 18-inch smallmouth black bass; Richard Haring, 8¾-inch sunfish; Ernest Freed, 15-inch brown trout; Howard Fretz, 13¼-inch brook trout; Boys contest—Stanley Weirback, 14¾-inch sucker.

The fish stocking program of the past year included 2000 trout and 6000 sunfish. The club also donated $100.00 toward rebuilding four dams. Last year it released 480 rabbits purchased from Kansas trappers, 84 received from the Game Commission, 56 trapped locally, and 22 that were reared by the Game Committee. It also released 96 cock and 37 hen pheasants received from the Commission, and 125 cocks purchased by the club. In January of this year 49 hen pheasants, 5 squirrels and 5 rabbits were released.

The Forestry Committee reported that during the past year 4500 seedling trees were planted on the Fisher State Game Farm and that a similar planting is planned for 1940.

All of these reports brought forth much applause but none was more pleasing than the report of the treasurer which indicated that the club treasury still has something more than $500 as a balance.

More than 300 members have renewed their membership for 1940. This total is nearly 100 in excess of the same date a year ago. Nearly a hundred door prizes, donated largely by local merchants, were awarded.

WITH THE CLUBS

4-H Club Assists Carlisle Sportsmen

Visions of far-reaching possibilities in a state-wide extension of a project of the Lower Frankford Township (Cumberland County) 4-H Club are seen by the Carlisle Fish and Game Association as the result of an account of the game feeding activities of the club related recently at the association's annual Guest Night by W. Fred Thumma, Carlisle, R.D., adult club leader and W. Irwin Galt, Agricultural Extension Agent for Cumberland County.

This program is the only one of its kind in the county, and is said by the Game Commission to be the only one in the state of which it has knowledge. It has enlisted the efforts of the entire membership of the 4-H Club, which is comprised of about twenty-five boys and girls residing along the North Mountain ridge which forms the boundary between Cumberland and Perry Counties, but particularly in the McClure's Gap area, long famous for the abundance of upland game.

The members of the club, being reluctant to allow their activities to lag during the winter months, cast about for a worthwhile project. Their able and far-sighted club leaders saw the possibilities and need for an artificial feeding campaign in their immediate territory. Messrs. Thumma, Mountz and Wentz, adult club leaders, wishing to learn more about the activities of the Game Commission, and how sportsmen's organizations conduct their winter feeding programs, contacted Mr. Joseph Foreman, County Game Protector.

After receiving this information the club leaders, assisted by W. Irwin Galt, County Farm Agent and John Altland, Secretary of the Carlisle Fish and Game Association, presented this novel project to the club members at their regular meeting at which time they immediately began a worthwhile and helpful campaign of winter feeding in Lower Frankford Township.

Interest of the young club members had been already enlisted because of the efforts of one of the youngest of the group in rearing a baby rabbit via the medicine dropper method, and subsequent care and feeding, so that as a matured rabbit it constantly played about the home and came to the yard for feeding. What the youngsters wanted most to know was how to make their efforts most effective.

Both Mr. Foreman and Mr. Altland explained the construction of approved types of feeding stations and feeding shelters for game which would not prove death traps by permitting their enemies to surprise and corner the feeding wildlife. As a result of their suggestions and the enthusiastic and consistent effort of the club members, some fifteen feeding stations and nine feeding shelters were built and maintained along a two and a half mile stretch of the North Mountain slopes and adjoining waste lands of Lower Frankford Township.

Photos Courtesy W. H. Thumma.

This work was gotten under way the early part of December last and continued throughout December, January, February and March, the club members making distribution of feed each weekend. Both boys and girls participated in these distributions, being divided into three groups or teams, each with definitely assigned territory so as to cover a maximum area without duplication of effort or waste. The feeding stations and shelters were so located as to serve turkeys, grouse, squirrels, rabbits, pheasants, quail and Hungarian partridges, all of which are found in and about the area. It is suspected also that a number of deer visited at the lunch counters thus provided.

It is believed that this type of project is particularly effective because, as Club Leader Mr. Thumma and Executive Director Seth Gordon of the Game Commission both pointed out, "farm boys and girls know where the various types of game and wildlife have their homes and accustomed haunts."

The Carlisle Fish and Game Association has continuously urged the cooperation of farm tenants and owners in feeding programs, pointing out that they were in a position to render ten-fold the assistance in snow and ice bound periods that the city sportsmen could possibly be able to render. For that reason the association is particularly encouraging the Lower Frankford Township 4-H Club to continue this novel project and hopes to see such activities become a part of the activities of all 4-H Clubs in the county and elsewhere in the state.

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COMMENTS ON PREDATION

(Continued from Page 18)

cougars, etc., usually have to be content with the weak and less agile members of their prey and therefore assist in maintaining the stamina of the species."

Now let use hear what the late Dr. Leonard Cockayne, F.R.C., D.Sc., (N. Z.), Ph.D., who was considered the foremost world authority on the flora of New Zealand has to say about the destruction of New Zealand's forests and about soil erosion caused by deer, where there are no predators to control them:

"The New Zealand high-mountain forests are the finest in the temperate zones as protection forests, on account of their undergrowth, and the thick water-holding bryophite carpet or cushions of the floor; but these features can be entirely destroyed by deer, and with this, the main value of these forests is gone. Even could the deer be exterminated, after this had happened, many years would elapse before restoration would be complete; or this might never come about, for erosion could easily gain the upper hand, and make such natural regeneration impossible. Thus these priceless forests of ours are in imminent danger of being transformed into debris-fields and waste ground, and the water which they controlled become the master, pouring down the naked slopes after each rainstorm, bearing with it heavy loads of stone, gravel and clay, to bury the fertile arable lands below, and occasion floods in the rivers. Is the protection of deer and the like to be permitted to lead to such disaster? It seems unthinkable that anyone interested in the prosperous development of New Zealand, knowing the facts, could answer the above question in the affirmative, though a few doubtless will argue that deer in limited numbers should be allowed. Possibly, if certain deer-forests were set aside, and deer strictly limited thereto, it might meet the case. But even this seems a dangerous method of dealing with a most serious question. Absolute extermination seems far and away the more reasonable policy."

In Canada we too have forests to protect, and our mountain slopes are also subject to erosion. We also have complaints about overabundance of some mammals in the great mountain parks. The natural control of the herbivorous animals whether mice, rabbits or deer is a task given by nature to the predators. Man will interfere at his peril.

Dr. Joseph Grinnell, Museum of Vertebrate Zoology, University of California, a prominent American Ornithologist and Mammalogist, in a paper in which he refers pointedly to the value of predatory animals in the United States National Parks, states:

" . . . the full native complement of animal life should be left absolutely undisturbed, save to the extent incidental to making the park accessible to the visiting public. I mean exactly this, that no so-called "vermin", such as wildcats, coyotes, weasels, hawks, or owls should as a rule ever be killed inside of National Park boundaries. Within large parks such as Yosemite and Sequoia, not even the mountain lion should be disturbed. All these animals belong in the territory, have been there from time immemorial, as parts of the perfectly normal biotic complex, to the presence of which the population of every other native animal is, by reason of its long-established and wholly adequate rate of reproduction, adjusted. Fluctuations in the numbers of each are to be expected. The numbers of one species may now be below normal, or above normal; our experience shows that, in the latter case *and* through natural causes, a downward swing will shortly occur, so that the population of carnivore and of herbivore tends to maintain a mean ratio from one period to another. In final analysis the total quantity of animal life in a locality is controlled by the total production of plant life there."

"Most of the cry against certain large mammals comes, I suspect, from the man who wants to trap for fur, or to shoot for sport, or else from the sentimentalist with false notions as to proper natural balance and as to the facts of natural process. The mountain lion, or the gray wolf, in gaining his own livelihood, simply disposes of a part, generally but a small part, of the annual surplus of deer which would otherwise accumulate to a point where the deer would become overpopulous and suffer as a result from competitive starvation when a severe season comes round."

"In summation: Animal life in National Parks should simply be let alone. It can be encouraged in amount and variety most practically by desisting from any avoidable interference with the full range of natural conditions of food and shelter. Here is a case where a *do-nothing* policy is the soundest policy, *if* Director Mather's definition of National Parks as *preserves* is to be adhered to. Also, introduction of non-native kinds of animals should be guarded against like the plague."

The birds of prey constitute a special section in the predatory animal problem. They are quite largely migratory and they have been unceasingly warred against throughout their range by man so that many species are now dangerously depleted.

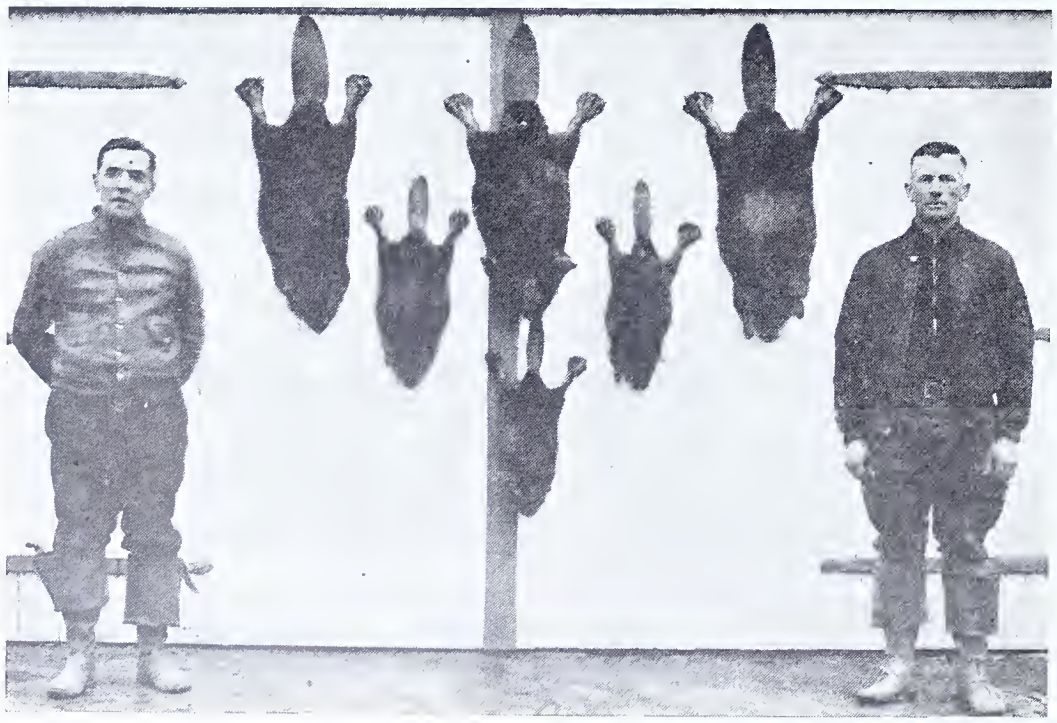
It is suggested that all organized attacks on birds of prey should cease, and that the destruction of hawks and owls should be limited to birds which are actually causing damage in barnyards or other similar areas where there is an artificial and unusual concentration of food that man must be permitted to protect. General and indiscriminate killing of all hawks and owls is bound to result in the loss to man of more friends than foes, and affords a dangerous upset of scores of interrelationships which are so complicated that they are as yet but slightly understood.

Very few people are competent to identify the different species of hawks and owls, and experience has shown that the great majority of hawks taken by hunters in the field are of beneficial species.

It is a shocking thing to anyone who remembers the abundance of hawks on the prairies of a few years ago, to find that these birds have all but disappeared. This has, unquestionably, happened because of the thoughtlessness of persons with firearms, who shoot these inoffensive birds from the roadside, sometimes in the mistaken belief that they are doing good thereby.

Game administrators should do everything that is possible to meet mistaken ideas about birds of prey and to discourage the killing of them. We cannot afford to do without the services of these birds in the killing of rodents, of which they are one of the most efficient natural checks. Even if some of the larger birds do prey upon game birds, it is not proven that they do harm, and on general principles it is quite probable they do good to the species upon which they prey.

(Continued on Page 32)



M. J. Stumps, of Hegins, (left) and companion with this season's catch of beavers.

THE SKUNK LINE

(Continued from Page 19)

can get his traps out faster and easier. There are many things to do such as finding feeding grounds, trails, building "cubby pens", fixing "crossing log" set locations, putting out bait, testing and preparing scent, fixing traps, making stretchers and a hundred-and-one such things that are really necessary.

Since I have "trapping fever" powerfully bad the whole year round I do a lot of prospecting and preparing, which I find is as interesting to me as the actual trapping. Yes sir! Take your packbasket or packsack, axe, and other equipment and spend your spare time out along the streams and woods; you will have a fine time and be paid with more filled stretchers after the actual trapping begins.

I find that the best traveling weather for skunks (and 'possums) are the warm, damp, misty, or foggy nights. These kind of nights are the best on which to hunt these animals with flashlight, lantern, or whatever you use. You will usually have a good catch on mornings following such nights.

Different baits are now being widely used in Pennsylvania on account of the law prohibiting den trapping. I have seen all kinds of baits fastened or propped above traps by different trappers in trying to catch skunks and various fur-bearers. However, I use bait at but few sets, for after years of experimenting, etc., I find my scents or lures are all that are needed. The baits I generally use are butcher offals and pieces of carcasses of skinned fur-bearers such as muskrats and possums. I have read of many trappers having good success by using skunk carcass bait for skunks but I find it of no value. However, many things are good for skunk bait, such as meat and food scraps, various refuse, chickens, rodents, and tainted carcasses. I find that skunks in the wild mainly eat grub worms which they dig from the ground and from stumps around pastures and fields. I have also noticed where skunks have dug up bees' nests for their honey whenever such nest was in or near the ground, and I have caught the animals at such places.

I believe that scents are one of the most important things in the trapper's outfit for practically every fur-bearer. Here are a few instructions for making a scent that is very good for both skunks and 'possums. The ingredients are simple ones and easy to obtain. They are fish oil and anise. The fish oil should be trout oil preferably and about one-half of your bottle should be composed of it. The muskrat meat and sacs should be cut from 'rat carcasses and rotted in jars like fish oil and about half of your scent bottle should be of this. Add about an ounce of anise oil to a quart of fish oil and muskrat mixture. This mixture should be well shaken before using.

In using this lure I usually dip a dead twig or weed straw in the bottle until it is well saturated with lure and stick it up near the trap, or else I sprinkle on the ground, as at a "dirt-hole" set. The way you use the lure depends on the type of set. If you don't like to "mess around" with smelly materials then I would advise you to buy your lures already made. I make most all of the lures I use on my lines but buy a few kinds to test out once in awhile. However, I have had little success with bought lures.

Concerning traps for skunks I will say that I can hold skunks quite well in single jawed traps of number one size in the Blake & Lamb, Victor, and Gibbs makes. If you fasten traps to light clogs or drags such as small limbs, you can greatly reduce the chances of escape such as you have at sets which are solidly fastened. I always like to excavate a bed for all my traps so that they will be level with the surface of the ground and cover over lightly.

Other equipment needed includes a good axe, trowel, pliers, wire, staples, and knife. For carrying trapping equipment and catches one should have either a packsack or packbasket. I use both, the packbasket to carry traps and catches, and the packsack for scents, baits, and other equipment I need.

There are all kinds of sets used for trapping skunks. Here in Pennsylvania, on account of the law prohibiting den trapping, trappers who do not know much about any other kind of sets attempt to catch skunks in various baited sets that are almost worthless. I have noted at different times sets made by nailing a chunk of meat or such to a tree, stump, or fence pole, with trap underneath, also traps set around bait on the ground. I have also seen bait tied to the pans of traps. Such sets will make but few catches.

The cubby pen baited set made of stones, chunks of wood, or stakes, in a horseshoe or "V" shape is an old but reliable set and is widely and much used by trappers. The pen should be made so that there is but one entrance, and it is best to have a good roof on it also. The bait or scent is placed in the pen and the trap set at the narrow entrance or back of the pen near the lure. These pens should be made in good hidden locations so as to be away from eyes of passing persons and "sneakums".

The set that is probably my favorite is the "dirt hole" or bait hole set. The location for the set should be where there is soft soil such as at sand spots, dirt banks, or rotted away stumps, in open country such as pastures, fence rows, fields, or open spots in the backwoods. Using a trowel, a small hole about four inches deep and about three inches in diameter should be dug so that the hole is slanting. It is well to throw up fresh dirt all about the set as the fresh dug dirt alone will attract skunks. The trap is set a few inches directly in front of the hole in a little excavation made for it and lightly covered with dirt. If a stake is used it can be driven into ground beneath trap, or the drag just placed near the set. It is best to use a small piece of bait in the hole and to cover with a little dirt and pour the scent on top of hole. At these kind of sets I have taken skunks, 'possums, and weasels with scent alone.

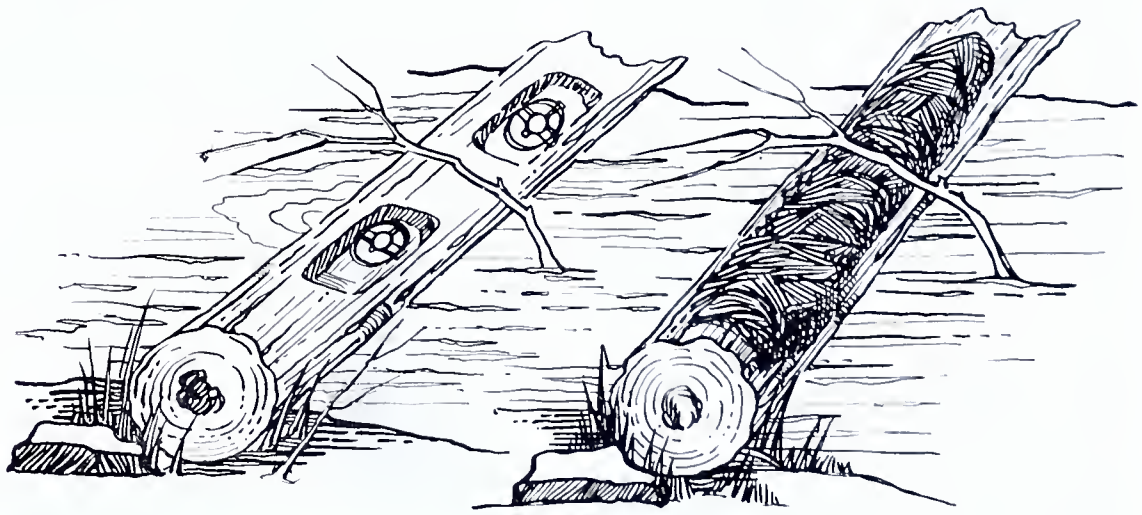
The "crossing log" set is a good one in certain locations. It is made on a log over a stream of water. If the location is a good one and if there are skunks around and no other crossing places anywhere near, this kind of set will make many catches of skunks, 'possums, weasels and even minks, 'coons and foxes. An old rotted log is located over the stream or one placed there so that either end is on a bank and above the water, then chop a notch in the log at each end for traps. The traps (preferably undersprings) are placed in these notches and covered with a few water-soaked leaves and soft soil. It is preferable to fasten traps to clogs of wood which can be leaned against the log. These sets are apt to take almost any animal.

There are also many blind sets* that can be used to good advantage to the trappers. By blind sets I mean sets without bait or sent or not at dens. Trails near dens are good spots for sets. Old roads can be narrowed off to make a good set location. Ditches through fields, along roads, and culverts are also good blind set locations. Around cliffs of rocks blind sets can be made between a big rock or tree and cliff if it is suitably narrow or it can be made so. The trapper who does a lot of prospecting and preparing can find and fix up some dandy set locations that will mean many more pelts.

After catches are made the pelts should be carefully prepared for market. I won't explain the process of skinning skunks as most all trappers know how, but I will say that it is best to cut around the skunk's "stink bags"

Continued on Page 32)

*The Game Commission rather discourages the use of these sets because rabbits and hunting dogs are likely to be caught in them.



Log Set.

Let's Help The Game Commission By Helping Ourselves

By Frank J. Floss

★

Photo by the Author.

Members getting ready to trap rabbits in South Park, Pittsburgh.

THE Bridgeville District Sportsmen's Association, believing in the Biblical excerpt "As ye sow, so shall ye reap", leased a tract of land containing 200 acres for fifty dollars a year. We surrounded it with 17,000 feet of single strand wire, on which we hung signs reading "Bridgeville District Sportsmen's Association. Game Refuge — No Hunting."

Within the boundaries of the refuge is a stand of tall red oak, some nut trees, and an apple orchard, open fields, a small brook, and all kinds of cover for small game—a perfect sanctuary. Food boxes are found at frequent intervals, and once a week they are filled with scratch feed, and ear-corn is stuck on pegs throughout the area. We allow no hunting on the refuge at any time, and game has become so plentiful that we decided to experiment by trapping off all the surplus, liberating it on open shooting areas that had been shot off during the past season. On our first trapping expedition we set out 57 box traps on the refuge area and in six days trapped 87 rabbits. Then, after making an inspection tour of the area, we decided that we had trapped off enough for this year. But there is still plenty of game left over, and anyone walking through can see rabbits, squirrels, coveys of quail, and pheasants in flocks of 75 or more.

After our successful experiment we decided, with the help of Ralph A. Liphart, Game Protector for Allegheny County, to secure a permit to trap rabbits out of South Park, an area of some 3600 acres, located 12 miles south of Pittsburgh. The rabbits there have become so numerous that they have wrought havoc on the Park shrubbery. South Park being a no hunting area forms an unintended small game sanctuary, with no possible way to control surplus game except by trapping. After securing our permit, fifty Bridgeville District Sportsmen, with two trucks loaded with 152 box traps secured from the Game Commission, set out for South Park.

The traps were set and baited with apples in lines of 20, parrallel to each other, where they would be easy to find in the wee hours of the morning. Every week the traps were moved to a new location until the whole park was thoroughly covered. The rabbits caught were then released in the surrounding townships of Allegheny County. By the time our permit ran out on March 1st we had trapped over 500 rabbits.

Since the Assocation always purchased rabbits in the past, it naturally saved considerable money by trapping them. During all the operations the club's movie camera man was recording all the trapping procedures in technicolor for future reference.

Now if we can do this, surely other clubs can do likewise. Throughout the State there are parks, public grounds, nurseries and boroughs where sportsmen's associations can help themselves and also the Game Commission by trapping their own game, thereby saving the expense of buying it. We would like to see more clubs take an interest in refuges and trapping instead of relying on the Game Commission to do all the work. It is the original aim of sportsmen's associations to help promote better hunting and fishing, and they can accomplish this objective if they help more and criticize less.—**LET'S HELP THE GAME COMMISSION BY HELPING OUT OURSELVES!**

BEARS LISTEN!

(Continued from Page 25)

jumps off the log behind a low rise in the ground, barely high enough to hide him, that runs parallel with the road; but I figure he'll come over the top so I stays quiet. A minute or two goes by and no sign of him. I get to thinking maybe he's running behind that hump. With that thought I scramble down off them rocks and runs up the road where that rise peters out on the side of the hill.

I'm standing there looking things over pretty close when I spies a patch of black up on the side to my right in the thick brush. I slips the safe off and starts taking a bead. "Whoa Georgie!" thinks I, "better have another look. Al's up there somewhere and you're liable to see bears all over the place the way you feel now." But I wasn't in doubt very long. About the time I have my gun half lowered he turns his head. I tried to find a spot through the thick brush but it was no go so I just held on the black and squeezed it off. At the report he made one tremendous jump, turned and started back over the top. I had one more hasty shot running and he disappeared in the brush.

As I fired my second shot I had a hazy recollection of Larry stumbling out of the car a tangle of arms, legs and lunch papers. He was standing there with a half grin on his face, not sure whether he was being kidded or not, when I ran past. I yelled for him to watch the road below and kept going. I didn't go far before I was stopped short by the sharp report of Al's rifle—four shots spaced just about right.

I figured if Al had four shots the way he's ticking them off we had bear meat up there somewhere so I lets out a yell. No answer. I yelled again and this time I get a kinda squeaky, "All right," so I starts up through the bush. I finds Al up there with the bear at his feet and his face split from ear to ear with a grin. As I reach over to shake his hand he remarks, "If we ever run into that old duffer of last night, remind me that I owe him an apology!"

Pretty soon Larry comes striding up with that mile eating gait of his, with his gun in one hand a half eaten sandwich in the other. He would have gone right past us if we hadn't called him and brother the expression on his face when he saw us was a sight to behold. After we simmer down a bit Al gives us the story. My first shot had burrowed a pencil grove just under the skin the whole length of the back apparently doing no damage at all except to turn him straight in to Al, who, out of four shots had hit him with three, the last one in the heart broadside at about ten feet. When Al was telling us about it he says, "Funny thing about that bear that he didn't turn away as I was shooting; just kept right on coming." I looked at Al suspiciously, half expecting that old charging bear story, but he must have read my thoughts because he said "Naw, he wasn't mad at anybody. The only thing he had in mind was to get out of the county."

Deputy Game Protector Chad Troxell, Blair County, one of the agents trapping rabbits, caught a 7 pound house cat in one of the traps. A rabbit in the trap was partly eaten by the cat.

PLANTING FOOD AND COVER

(Continued from Page 15)

honeysuckle, bittersweet, blackberry, greenbrier, Virginia creeper, dewberry, and grapevine.

The 1940 Agricultural Conservation Program in Pennsylvania provides for benefit payments to landowners for planting or transplanting shrubs of a variety helpful to wildlife, and which is recommended by a Game Protector of the Pennsylvania Game Commission. Areas planted must be given reasonable protection against fire and damage by livestock grazing. Additional information concerning this practice may be secured from the A. A. A. Committee in any county.

Sportsmen's organizations which have sponsored Special Wildlife Refuge Projects should be especially interested in pointing out the possibilities of the program to the landowners from whom these areas are leased. Assistance in many cases, no doubt, will be given to farmers by sportsmen in the planting under the A. A. A. program. Such cooperation means better wildlife habitat on the farm, and it means a small cash income to the landowner for carrying on the work under the A. A. A. regulations.

If you happen to live in a town or city, and want to help wildlife, go to some farmer friend's place or make friends with some nearby farmer and help him plant wildlife food producing trees, shrubs, vines. Take some grain seed along and help plant that, too. It is surprising how many carefree, happy hours can be spent in this manner. The exercise and fresh air also will do wonders for the health. The real pleasure comes from assisting and working with nature, watching the plants spring to life, blossom and then fruit. You will be surprised how soon your efforts are noticed by wildlife, and the presence of increased numbers of feathered and furred species will be quickly observed.

The wildlife food which is planted and cared for will be the salvation of wild creatures during the long, cold, snowy winter months after all plant life has ceased to grow, when wildlife knows not which way to turn for food and protection from the weather.

Central Junior High School pupils, Allentown, set a good example last year building bird houses and distributing them under the direction of G. Dewey Fenstermacher, member of the Faculty. Now is the time to build and erect bird houses for this year.

EDITORIAL

(Continued from Page 1)

released from suppression. The new growth of sprouts which spring up this summer will provide food for several years to come.

The planting of trees and shrubs for food and cover that were carried on by the Game Commission in the past are becoming more and more valuable each year. Places that were wildlife deserts, now sustain fairly large populations and relieve the pressure on the food supplies in surrounding areas. Isn't there some way to interest more people in this program which is so vital to us?

Our Farm-Game relatives are extremely pleased at the large number of small refuges established under the Cooperative Farm-Game Program, and they feel that if these refuges become more widely distributed under the new Special Wildlife Refuge Program our numbers will increase correspondingly.

We deeply appreciate the assistance given us in the past, and trust that the sportsmen and Game Commission will continue to do all within their power to provide more food and cover for us. . . .

Now is the time to push your planting programs to furnish food for next winter. Induce your farmer friends not to destroy blackberries, wild grapes, sumacs, dogwoods, etc., except where absolutely unavoidable. Wildlife must have food and cover to survive —not a bare cupboard.

4-H CLUB ASSISTS CARLISLE SPORTSMEN

(Continued from Page 27)

Club members with interest thus aroused, and with experience under able guidance in making such programs effective, will become the future nucleus of an intelligent and influential land group devoted to conservation of wildlife—the birthright of all future sons and daughters who roam Pennsylvania's woods and fields.

Pine cones with suet stuffed between the sprout scales of the cones make excellent feeding counters for birds and can easily be suspended from a tree limb with wire or string.

Over 36,000 public spirited organizations including sportsmen's clubs, women's clubs, garden clubs, boy and girl scouts, service groups, etc., enthusiastically participated in Wildlife Week throughout the nation.

WOODCOCK FOOD

Game Land Manager Earl E. Smith, Elk County, makes a very excellent suggestion for improving food conditions for woodcock which we are very glad to pass along to fishermen.

Mr. Smith suggests that fishermen using angle worms, especially those who fish for bullheads in the ponds, swamps, and bayous, which are always close to good woodcock cover, can help the woodcock and the woodcock hunters by dumping the worms left over from their fishing along the shore on grassy locations where most of the worms will survive and multiply, and in turn furnish food for the birds.

Frequently cans with hundreds of worms are left in the sun to die, and later to become a nuisance to other anglers who fish in the vicinity. The worms could just as well be planted without much effort for the benefit of the woodcock which eat these worms in preference to almost any other food.

"We are feeding a large number of grouse at our feeders this winter, and they seem to be wintering very well. The deer yarded up during this last snow around improvement cuttings and hardly moved off an area of five acres."—Game Protector Roland Turley, Bedford County.

PROPAGATING WILD TURKEYS IN THE WILD

Each area was stocked with ten carefully selected hens.

(Continued from Page 4)

most of the hens have one wing clipped in order to hold them within the area. Unless the stubs are pulled out earlier, these hens cannot escape until after the moulting season. After the first clutch of eggs are laid, the hens are trapped, the feather stubs are pulled and the feathers grow in again. Within four to six weeks they again become full flight birds during which time they lay the second clutch of eggs. They are permitted to hatch this second clutch of eggs, after which they are released from the area and allowed to seek their own range.

The second group of areas are classified as Restocking Areas. In these, no eggs are collected, and the hens, instead of being clipped, have the main feathers plucked on one wing. They leave the area within four to six weeks, at which time they have become full flight birds.

In the early spring, after the snows have melted on the eastern slopes of the mountains, all nature begins to awaken to new life after its long winter's sleep. The Old Tom is the first to respond to full vigor. From the tops of the ridges his gobble resounds in the valleys below, and he listens for the mating call of the fairer sex. His whole interest becomes centered in seeking their company. He will travel for miles during the mating season searching for mates. In these travels, he hears the call of the ladies in waiting within the area, where a harem is provided for him. At times, the old boy will strut and run along the area fences. Perhaps one night he may roost in a tree top on the mountain side above the area. When this occurs he will fly from the roosting place into the area in the early morning. At other times he comes to the fence seeking an opening which may be provided by a ramp and a drawn gate. The ramp is made of logs covered with leaves and dirt. It is about thirty feet wide with the drawn gate at the top. The noble Old Fellow struts up the ramp and drops into the area.

At the present time fourteen of these areas have been established in eight of the best wild turkey counties. Ten of these are classed as mating and four as restocking areas. In several cases it was possible to secure the help of WPA, NYA, and CCC Camp labor in the establishment which materially lowered the cost to the sportsmen. Advantage will likewise be taken of such assistance, wherever available, in areas to be set up in the future.

As was previously pointed out, the whole program is carried on the "*Wild Turkey Way.*" The collecting and transferring of eggs from the area to the Wild Turkey Farm within the past three years has produced without a doubt improved and wilder stock at the turkey farm. In fact, the wild tendencies have become so pronounced that the propagation and control of the birds at the farm has become a major problem. They are becoming very difficult to handle, and special care is required to confine the wilder stock to the holding pens at the farm. However, this improved and wilder strain of turkeys produced at the farm for restocking purposes is the goal toward which both the Commission and the sportsmen have been striving for many years.

In order to ascertain the progress which had been made in increasing the supply of wild turkeys within their natural range, a survey was made during the months of February, March, and April, 1939. Commission employes and interested sportsmen in ten counties in South Central Pennsylvania conducted this survey, which at a conservative estimate placed the number of birds at 3,750 in these ten counties prior to any stocking from the Wild Turkey Farm. It was generally agreed that this was considerably more of a seed stock in this wild turkey range than had been present for many years.

The success attained with the areas and the ever-increasing popularity of wild turkey hunting has led many of those who are familiar with the program to urge its expansion into other wild turkey counties. Each year more and more hunters match their wits with the wary wild turkey and with more hunters comes the demand for more turkeys. The program as outlined, from all indications, is the one sure way to meet that demand and it seems to be ample justification for the Commission to extend the benefits of it as rapidly as possible to additional counties in the wild turkey range.

COMMENTS ON PREDATION

(Continued from Page 28)

That most creatures kill to live is a fact of nature. Those who object to certain birds or animals of prey because they gain their livelihood by killing, even by what some people are pleased to term cruel killing are setting themselves above the laws of nature and are missing obvious multitudinous events which occur throughout animate nature, and which must continue to occur.

Except for direct defense of domestic stock, the attitude of the public towards predators is based generally upon prejudice and lack of knowledge, and it is the duty of those who have studied the problem, even though they have not fathomed all its intricacies, to give to the public the benefit of the knowledge gained in the hope that a saner and more philosophical view will be accepted as more is learned of the facts presented by the biologists who are wrestling with the problem.

NOTE: The discussion of this paper at length by the representatives of British Columbia, Ontario, New Brunswick, and other delegates brought out the need for further observation of the effects of predation in various parts of the Dominion.

THE SKUNK LINE

(Continued on Page 29)

and slit its tail to the end and remove the bone; also remove the fat from the pelt. If one makes many catches and has the time it is well to skin the catches along the line to make easier traveling.

It is necessary for most sideline trappers to avoid getting "stunk up" but if you do, tar soap is good to wash with instead of ordinary soap, and turpentine on clothes, etc., that necessitate the removing of smells. Trappers can learn much and really enjoy themselves reading good magazines such as this one.

Hoping I have been of help to you trappers of the skunk I will now end this article. May the odor around your fur shanty smell of skunk, and may you enjoy yourselves for years to come.

Benj. M. Forry, of Richland, suggests the following method for protecting dogs: That those sportsmen who wish protection pay an added fee upon purchase of their dog licenses, and with this added fee have a number tatooed or stamped in the dog's ear and a record of it kept by the state and the dog owner. Then if the dog is stolen and the person caught or convicted of stealing the dog he should be fined accordingly and not be permitted to obtain a hunter's license thereafter.

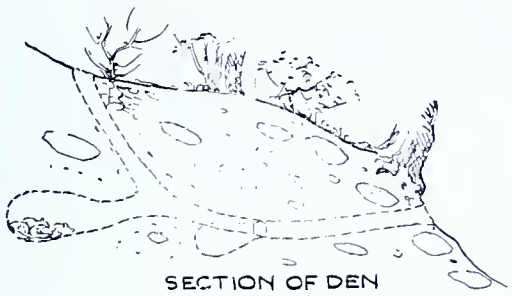
THE RED FOX

HUNTER
MICE FORM ITS FAVORITE FOOD – BUT IT ALSO RELISHES FRUITS, NUTS, AND SUCH SMALL BIRDS AND BEASTS AS IT CAN CAPTURE.

HUNTED
YEARS OF PERSECUTION HAVE MADE IT PROVERBIAL FOR ITS CUNNING AND RESOURCEFULNESS.

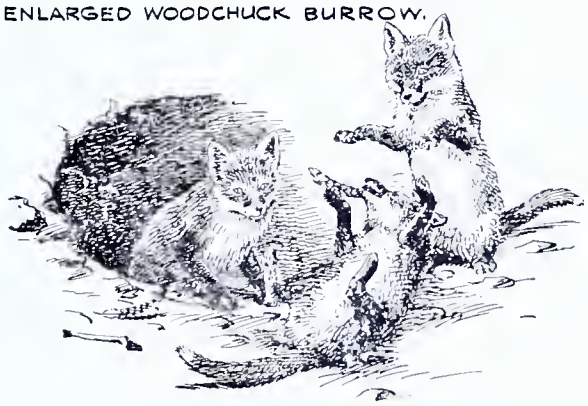
EYE OF FOX
WITH CAT-LIKE PUPIL

EYE OF DOG



SECTION OF DEN
SOMETIMES DUG BY THE FOX, BUT OFTEN AN ENLARGED WOODCHUCK BURROW.

ASLEEP
USING THE TAIL AS A BLANKET



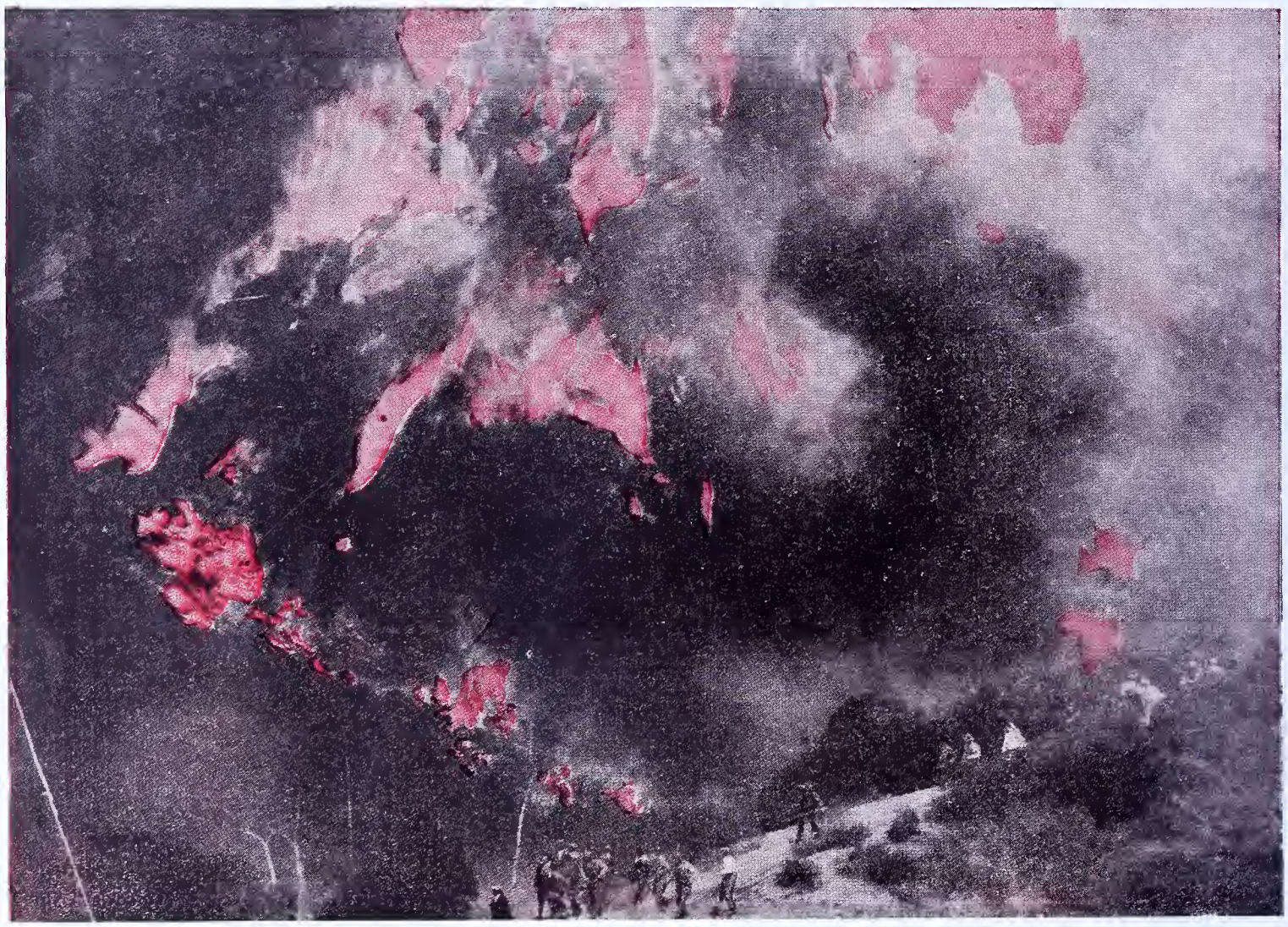
FOUR TO NINE YOUNG ARE BORN IN MARCH OR APRIL, LOOK LIKE KITTENS AT FIRST AND ARE VERY PLAYFUL

FOX SMALL DOG
TRACKS

E.L. FOOLE

Wildlife Syndicate, 1940

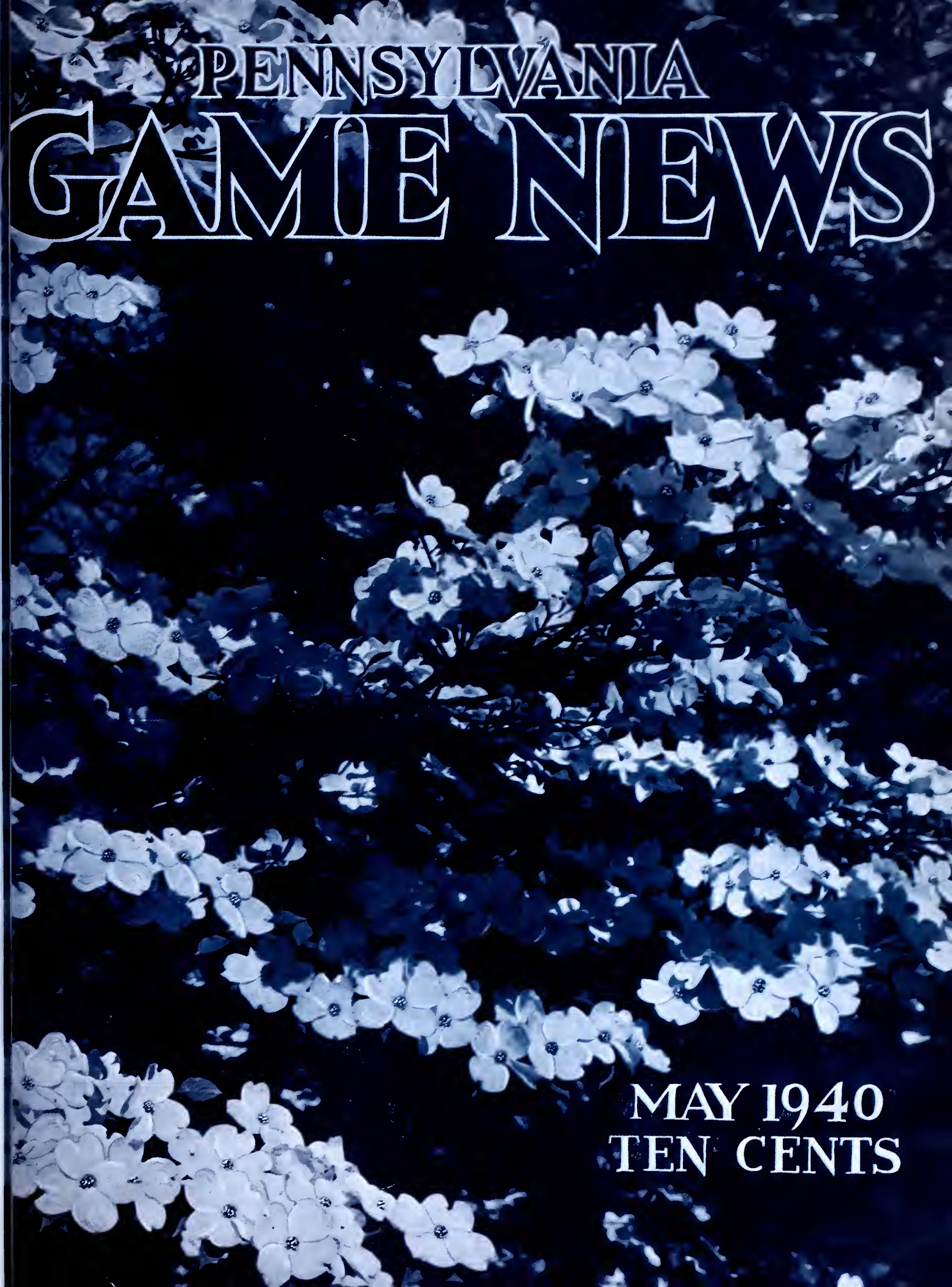
EVERYONE LOSES



Courtesy "AMERICAN FORESTS"

WHEN FORESTS BURN

PENNSYLVANIA GAME NEWS



MAY 1940
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EDITORIAL

MAY 1940

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COVER: We are indebted to Adolph Muller, Norristown, former President and member of the Game Commission for the beautiful photograph of dogwood which adorns the cover this month.

LANDOWNER COOPERATION

THE economic value of wildlife to the farmer cannot be estimated in dollars and cents. While he may recognize this fact subconsciously he invariably overlooks splendid opportunities to encourage certain forms of wildlife to work for him. He usually manages his farm in an effort to attain the greatest agricultural benefits, forgetting the fact that those same benefits are dependent upon wild creatures whose presence he should invite and whose friendship he should cultivate.

Therefore no landowner can afford to burn over the homes for quail or songbirds; he cannot afford to cut clean his fence rows and other untillable spots and leave them devoid of food and cover for his feathered allies. He cannot afford to harvest his hay or grain crops during the nesting season without taking some precautions against killing or maiming the creatures that nest and rear their young in his fields.

That is why more and more farmers are piling brush into obscure, unused corners of their fields; are letting their fence rows grow up to brush and briars; and are using the flushing bar on their mowers to frighten game birds and animals from their nests before the keen edged knives slaughter or maim the innocents. The flushing bar saves hundreds of game birds annually. It is simply made, yet its effectiveness is amazing. If every farmer used this simple device, he and the sportsman would benefit tremendously.

Every reader of the Game News should contact his farmer friends and encourage them to cooperate in this worthy program.

MOTOR MENACE

THE loss of valuable wildlife on the Nation's highways each year is appalling. The annual toll, if the truth were known, is perhaps equal to that taken by the hunters themselves. This loss, while great today, will become even greater as roads are still further improved and new and better highways are constructed. Safety for wild creatures in the future, therefore, must necessarily depend upon the motorists themselves.

The fact that a large percentage of automobile owners today are also ardent hunters or lovers of wildlife throws the responsibility for safeguarding the wild creatures right into their own laps. Upon the degree with which they realize that responsibility hinges their future sport or enjoyment. If they assume an attitude of indifference, which can as easily be influenced by speed and good roads, they will disregard their wild friends. Their philosophy may be, "It's tough, but what's one rabbit more or less". If everybody felt that way hunters might just as well start thinking of hanging up their guns, and those who enjoy the thrill of seeing wild creatures along the highways will be denied that pleasure.

Wildlife killed in the spring and summer months cannot be computed on the basis of individuals; many females carrying unborn young fall prey to speedy juggernauts of the roadways, consequently the potential game supply for the following fall is correspondingly greatly reduced.

"Give wildlife a break" should be every motorist's slogan. Lower your beams. By so doing you will also lower the mortality rate usually caused by indifference and increase your sporting possibilities by tolerance.

PLANT FOOD PLOTS NOW!

IN order to assure a supply of game, there must be ample food and cover. Food and cover does not originate out of a crystal ball. It must be planted where it is needed. Farmers talk in terms of dividends; hunters talk in terms of game bags. Yet neither realizes that none will be forthcoming if the very creatures which make these returns possible are given no opportunity to perpetuate themselves.

The basic fundamental of all life is environment, and environment includes primarily food and cover. If you want more game you will have to make homes for it; you will have to provide food for it. Now is the time to do your part. Plan to plant your food plots **NOW**. See Page 3 for further information on Pennsylvania's Food Plot Mixture.

To The OUTLAWED SPARROW

by

George Dresch, Cochranton, Pa.

Saucy fellow, quick and bold,
Some folks rail at you, and scold;
All your tribe they would exile,
They detest your habits vile;
Jangling, flirting, dropping grout,
Nesting in the water spout.
There's no beauty in your coat,
No song gushes from your throat;
Your shrill voice, they say, is heard
Only when your wrath is stirred;
Then, with others of your kin
You create an awful din,
Screeching, fighting—such a mob!
Living but to kill and rob!

But don't worry—don't despond,
We'll defend you, vagabond.
You have faults—that's plain to see,
But that's nothing—so have we;
Some folks live yet never toil,
You work hard for your scant spoil.
Little known are your good deeds,
How you help to check the weeds,
How the worms you seek and slay,
How with insects you make way;
How you struggle in the street,
Dodging wheels and flying feet,
Risking life to snatch some food
For your hungry, waiting brood.

If your coat is drab and plain
It fits well, and sheds the rain,
And, altho you cannot trill
Like the thrush or whippoorwill,
Yet, when they have southward flown,
You remain with us alone;
And oft, in the winter's gloom,
When the world seems like a tomb,
Merrily your voice rings out,
"Cheer up, folks!" you gaily shout,
And that greeting—that alone,
Does for all your faults atone.
So we thank you, little friend—
Keep on chirping to the end.

CONSERVATION MISTAKES

By ROSS L. LEFFLER

MISTAKES! We all make them, and by so doing profit thereby—that is if we are wise. If we are unwise we do not profit.

Mistakes have been made in attempting to safeguard and properly administer our natural resources—in some cases the real mistake was forgetting about them altogether. Take our National mistakes for example. Primeval forests were cut and wasted without regard for future needs. Out of more than 800,000,000 acres there are only about 125,000,000 acres of virgin forests left, mostly in the National Forests of the far West.

Millions of acres were cleared for farming which should always have been kept in forests. The top soil soon washed away and today the Federal and State Governments are doing their utmost to reforest our idle acres, and to check erosion on thousands of farms which can still be saved.

Municipal and industrial wastes were dumped into public waters without regard to the consequences. Today 85% of the Nation's streams are so badly polluted that they are either unfit or badly impaired for industrial municipal, and recreational uses. Pennsylvania now has one of the best anti-pollution laws in the country, and the Federal Government is giving the matter an increasing amount of attention.

More than 75,000,000 acres of former waterfowl, fur, and fish producing areas in the United States were drained to produce more agricultural land. A large portion of the land so drained was worthless. Waterfowl breeding grounds were so badly impaired that until recently migratory game birds were in serious danger.

Wildlife was slaughtered for the market from one end of the Continent to the other. Certain species were exterminated, the most noted of which was the Passenger Pigeon. These birds formerly came into Pennsylvania in enormous flocks, where, as elsewhere, they were netted and otherwise slaughtered for the market. The last known specimen died in a zoo in Cincinnati, Ohio, in 1914.

The Heath Hen, eastern cousin of the Prairie Chicken, was formerly abundant from New Jersey to Cape Cod. Killing them for the market in the early days was a common practice. The last known specimen died on Martha's Vineyard, Massachusetts, in 1931.

Mosquito drainage work, which has been going on in various parts of the country on a vast scale, is destroying the homes of many species of wildlife, their feeding, resting and nesting grounds, especially for waterfowl and shorebirds.

Pennsylvania has also made many mistakes and will probably make others in an attempt to solve the complex problems of administering the Commonwealth's natural resources. We in the Game Commission have been no exception. In an effort to bolster our game supply, thousands of dollars were wasted in unwise importations of various kinds. For example, between 1913 and 1926 we imported or purchased locally 177 elk. From 1923 to 1931 a total of only 98 bulls were legally killed. Today there are scarcely two dozen wild elk alive in the State.

Next we tried the Mexican bobwhites, importing almost 100,000 from 1915 to 1932. The chief value of this undertaking was to encourage our people to take better care of our native bobwhites. The imported birds produced no tangible results.

In 1915 we purchased 64 English Fallow Deer from New Jersey and turned them loose in Pennsylvania. They were never heard from. In 1925 we arranged to buy 100 Mule Deer from the Kaibab National Forest in Arizona, but fortunately the order was not filled and the $3500.00 deposited was withdrawn.

Numerous individuals have purchased Western Jack Rabbits and released them in Pennsylvania. These open plains animals were wholly unsuited to range and climatic conditions such as ours, and in every instance they promptly disappeared.

Wealthy sportsmen imported European Red Hares, animals much larger than any found in this country, and stocked them at various points. Some of them were released in Eastern Pennsylvania, where they caused the nurserymen untold grief. These same animals are now said to be a source of considerable annoyance in Ontario.

The Commission has been importing from 50,000 to 75,000 Cottontails annually for a number of years from the Middle West. Sportsmen's organizations also have bought large numbers. In addition to the constant danger of bringing in diseases, recent studies indicate that not over 25% of these imported rabbits survive beyond the first few months after their release. On the other hand, more than 90% of our native Cottontails transferred from suitable areas to public hunting grounds survive to reproduce their kind.

The Commission made rather extensive plantings of Reeves pheasants, but without results. Recently considerable numbers of Chukar partridges have been raised and released, but apparently these birds likewise are unsuited to our climatic and grange conditions, and the Commission is discontinuing further attempts to raise them.

For a number of years turkeys were purchased from various sources for stocking purposes. The stock, always of doubtful value, was the best available. Then the Commission set up its own turkey farm and raised anywhere from 2,000 to 3,500 birds. This venture was doomed to failure until the commission revamped its program so as to produce real wild stock of its own for restocking. We are now raising only 1,500 to 2,000 birds a year, but the results are much better.

For many years the Commission allowed the bear season to run concurrently with the deer season. We almost lost our stock of black bears before we realized the necessity for keeping these seasons strictly separate.

Since April 1915 the Commission has paid bounties on about 175,000 gray foxes. The bounty has been maintained at a constant level of $4.00 per animal since 1923. Notwithstanding this bounty, these game destroyers, which previously were confined primarily to the mountainous regions in the southern half of the State, have spread to almost every county of the Commonwealth. Apparently the bounty has been of little value in the actual control of his species. And the same seems to be true of the weasel, more than 1,300,000 of which have been paid for since 1915.

It is not very pleasant to talk about the mistakes we made, nevertheless when we glance at the credit side of the account we find that they helped us find the solution to many problems; they helped us see light where before we saw only darkness; they helped us to do our work better than we ever did it before.

PLAN FOR PLANTING

It is not too late to provide food and cover for wildlife for next winter. Remember how severe the past winter was, and how long it lasted. We thought that it would never let up, much less end. If it affected us so seriously with our auto heaters, warm houses and food, don't you think that the wild birds and beasts were hard put to survive. Sub-zero temperature, freezing winds, snow, sleet, ice. Not enough coverts for protection from the elements. Food scarce and sometimes not any. Buried under snow one to three feet deep. It couldn't have been located very easily. There must have been some deaths due to scarcity of food and cover. I'll bet it took a long time and lots of nutrition to put lots of wildlife back in the pink of condition this spring, too. Why can't each one of us go out now and do something, so that wildlife in the same fix next winter won't have to battle for its very existence? And some of it lose, too. We could buy grain seed and plant it on one of our friend's farms. Pennsylvania Game Commission Wildlife Mixture, 6¾c per pound, 15 pounds to the acre, $1.00, will yield 600 pounds of grain. We could even help him plant it. Shrubs and vines that he is going to destroy could be transplanted to make wildlife coverts. Grapevines, sumac, blackberry, etc., will furnish food too, as well as cover. Now is the time to plant or transplant, it will soon be too late. So let's act right now and provide food and cover for wildlife. Hurry!

The National Wildlife Conference

By Seth Gordon

★

BELIEVING that some of the highlights of the General Sessions of the Fifth North American Wildlife Conference (Washington, D. C., March 18 to 21) would be of interest to Pennsylvania sportsmen, I excerpted a few of them from my notes as follows:

Honorable A. Willis Robertson, of Virginia, co-sponsor of the Pittman-Robertson Federal Aid to Wildlife Act, delivered a very inspiring address on "How Can we Better Sell Wildlife to the People" which we are reprinting elsewhere in this issue for your enlightenment.

Honorable Harold L. Ickes, Secretary of the Interior, gave a very interesting general resume of what has happened since 1934, claiming that greater progress has been made toward the restoration of our natural resources than ever before. In brief he said:

"In 1934 the migratory waterfowl—harassed by drought and over-shooting in numbers— were at their lowest point in history. Since that year the number of ducks has been approximately doubled. A shortage still exists and will continue until all the areas on the continent suitable as habitats for waterfowl are carrying capacity populations. It seems wise to keep on with our present program until we have all the birds that the marshes can accommodate.

"An estimated seven and one-half million acres of waterfowl refuges are required to meet the minimum needs of such birds in this country. Approximately half of the total required area has been acquired and set up as refuges administered by the Biological Survey. In 1934 the total area of all classes of wildlife refuges and sanctuaries under the administration of the Biological Survey amounted to 6,085,000 acres. Today we have nearly 14,000,000 acres set aside for this purpose.

"The new order of conservation of the Nation's renewable resources has been in effect for only a few years, yet it has already become so thoroughly accepted and established in the minds of Americans that we wonder why a program so reasonable and sound could not have been undertaken long ago, in time to prevent the indiscriminate drainage of 77,000,000 acres of natural water reservoirs; in time to save our forests and the millions of tons of fertile soil that have been washed away by flood or blown away by the winds. We can never assure for America a future of peace and plenty until we renounce the role of squandering inheritors and become economizers and builders. In our handling of our natural resources for more than four centuries we were reckless spenders. Only during recent years we have learned to become earners. We have also learned that this is a nobler way of life.

Dr. Ira N. Gabrielson, Chief of the U. S. Biological Survey, presented a very fine picture of the wildlife situation today, emphasizing among other things the fact that "we can have wildlife only by providing it a suitable place in which to live, and we must keep our annual wildlife harvests below the annual production. All undertakings must be based on the results of careful research. As we look ahead we have three outstanding needs—a need for more basic information, a need for more land for wildlife, and a **great** need for a more widespread educational program that will get such information as is available into the minds of those who will use it or be influenced by it. Research must be continued on an increasing and expanding scale. We need research into diseases, into predator relationships, into the intricate problems of parasitism, and into the effect of man's activities.

"It is not within the realm of possibility that we shall ever have available for the exclusive use of wildlife and for the production of wildlife enough land to meet the demands for the various forms which are useful and valuable to man. It is therefore going to be increasingly necessary to correlate the production of wildlife on many lands with other perhaps dominant uses. If we are to approach the problem from the standpoint of the fundamental needs of wildlife we must go beyond a straight Federal or State owned land management program. We must promote in some way, in an ever-increasing degree, the restoration and preservation of suitable conditions and suitable environments for wildlife on privately owned lands, and this must be integrated with agriculture and other uses to which those lands must of necessity be put.

"Game crops produced on farms now furnish the larger part of the game taken for sport and food by the hunters of this country. Eighty percent or more of game and fur animals taken during the past few years have been produced and grown on private land. The records of hunting license sales are interesting from the standpoint of wildlife populations. In the eleven Western States, the so-called public land States, (Washington, Oregon, California, Nevada, Arizona, Utah, Montana, Wyoming, Colorado, Idaho, and New Mexico), there are about 200,000,000 acres of public domain and more than 133,000,000 acres of national forest. Most of these areas produce some type of wildlife sought by hunters. Yet out of 7,524,720 hunting licenses sold in the United States for the hunting season beginning in the fall of 1938 and extending into 1939, these States, which together represent about **40 percent of the land area** of the United States, **supplied only 1,110,752, or about 15 percent of the total hunters.** Contrast these figures with those from the farming areas. 4,966,699 hunting license holders, or 66 2/3 percent of the total, were recorded from the 26 States east of the Mississippi River. Many of these States are so nearly agricultural that it is difficult to find any extended tracts of really wild land. **Pennsylvania, 55 percent agricultural, and New York, 61 percent in farms, had to supply game for over 200,000 more hunters than the entire 11 western range States.**

"The problem facing the game administrators is definitely one of the correlation and integration of wildlife conservation into the program of agriculture. The great gap at present is between the technician and the administrator, and the owner and user of the land. **The farmer can be the most important individual in the whole field of wildlife conservation.**

"My suggestion is that we secure Congressional authority and adequate funds to provide Wildlife Extension Specialists, if we may call them that, to work with the Extension Service, the Soil Conservation Service, the State conservation commissions, the 4-H Clubs, the Future Farmers of America, the sportsmen, and any and all other groups who have the contact or the facilities to spread sound information to the landowners. In that way the needs of wildlife may be considered in every land-use program and the results of the studies made by our research and technical workers may be available to all who can make use of them.

"The continental population of ducks and geese has doubled in the last five years, and by continuation of the same sound program of environmental restoration and limitation of the harvest to less than the crop produced, there is no reason why the existing and newly restored breeding areas can not be eventually put into full production."

Carl D. Shoemaker, of the National Wildlife Federation, gave an interesting resume of the problems involved in the enactment of Federal wildlife legislation, and urged those present to let their Congressmen and Senators know their views concerning pending legislative proposals.

Hon. Karl E. Mundt, U. S. Representative from South Dakota analyzed the several proposals for Federal legislation on the subject of pollution, and pointed out the weaknesses in the original Barkley bill, also the advantages in the amendments which he and his coworkers succeeded in having put into the bill in the House. He made a most logical, convincing presentation.

At the conclusion of his address the conference, deviating from its usual practice to avoid the adoption of resolutions, went on record unanimously as being in favor of the amended bill, and urged that the House and Senate conferees approve the bill substantially in that form; and failing to do so that the bill be killed.

Albert M. Day, of the U. S. Biological Survey, reviewed the progress under the Pittman-Robertson Act. Among other things, he called attention to the fact that the tax on arms and ammunition amounts to about $3,000,000 a year; that on July 1, 1938 $1,000,000 were made available, and on July 1, 1939 $1,500,000; that the appropriation bill now pending in Congress includes an item of $2,500,000 for the fiscal year beginning July 1, 1940; and that each appropriation is available for a two-year period; following which unobligated balances revert to the Biological Survey for use in the National Waterfowl Restoration Program.

Only forty-three of the forty-eight states have passed the necessary legislation to benefit from the Federal Aid Program. The states ineligible are Montana, Nevada, Florida,

Georgia and Louisiana. The writer understands that in several of these states the legislators refused to enact the necessary legislation because they fear Federal domination.

The 43 eligible states have submitted a total of 232 projects, of which 180 have been approved. The others, most of which deal with the acquisition of lands, can not be cleared until valuation appraisals are made and options taken.

Mr. Day then reviewed briefly the various types of projects sponsored by the several states, and said that one of the outstanding evidences of progress under the Federal Aid Program is the large number of technically trained men placed in responsible positions in State Game Departments in the past 18 months. Of more than 100 employes added to the staffs of 26 State Departments, 85% are college graduates, most of whom are trained in wildlife management or the biological sciences. In addition, numerous graduate students have been employed on a part-time basis. (When the regulations under the Federal Aid Program were being framed provision was made that employes to work on that program be selected on the basis of competency only, and be required to perform their services in a manner acceptable to the Bioloical Survey.)

No state that permits a diversion of its hunting license fees from the administration of the State Game Department is eligible to participate in the benefits of the Federal Aid Act. Mr. Day stated that this provision has forced several states to discontinue diversions of funds, and has prevented several other raids on accumulated game license funds.

He also stated that rumors have reached the Survey that stories are being circulated to the effect that the Survey in administering the Pittman-Robertson Act is attempting to dictate seasons and bag limits on lands purchased with these funds. His comment was, "I wish to take this opportunity to emphatically deny this. **We have carefully refrained from any action that we felt could be construed as encroachment on the right of the states** to regulate seasons and kill, and we intend to continue this policy." (See further notes on the Federal Aid Program, "Conference with Biological Survey").

Charles H. Taylor, Assistant Director, Civilian Conservation Corps, gave a splendid account of the accomplishments of the C.C.C. to benefit wildlife. He called attention to the fact that under the proposed appropriations a considerable reduction would have to be made in the C.C.C. program. (Later on Members of the House Wildlife Committee asked some pointed questions about the value of the C.C.C. program to the several states. Apparently the anticipated cut will not be made.)

There was a very interesting discussion on the Farmer-Sportsmen Council. Those who spoke on the subject included John D. Chalk, President, International Association of Game, Fish and Conservation Commissioners; D. I. Rasmussen, Leader, Utah Cooperative Wildlife Management Research Unit; Frank C. Edminster, U. S. Soil Conservation Service; Colin Reed, Pennsylvania Federation of Sportsmen's Clubs; Arnold Nicholson, Associate Editor, Country Gentleman; Paul Miller, U. S. Biological Survey. Messrs. Louis J. Taber, Master, National Grange, and Edward O'Neal, President, American Farm Bureau Federation, failed to appear.

This was a general discussion on the farm-game program, in which the various plans of operation to improve relationships between landowners and sportsmen, and to increase the game crop, were discussed quite fully. All of the speakers on this panel agreed that the various Conservation Departments must give farm-game problems more attention, and that no one plan of paproach to the problem will fit equally well in all sections of the country. Colin Reed covered Pennsylvania's approach to this problem quite well.

In this discussion **two points were stressed; one, that farmer-sportsmen's councils should be organized wherever possible; and, two, that the states and the organized sportsmen must find a way to encourage the landowners to plant or to save food and cover,** especially for wildlife.

There was also a very excellent panel discussion on how to better sell wildlife to the people participated in by Frank Thone, Science Service; C. A. Paquin, Michigan Conservation Department; John Mock, Outdoor Writers' Association of America; Bob Edge, Columbia Broadcasting System; H. W. Hochbaum, U. S. Extension Service; John Baker, National Association of Audubon Societies; William T. Spanton, U. S. Office of Education; and a substitute speaking for Mrs. Fae Huttenlocher, National Council of State Garden Clubs, Inc.

The discussion brought out nothing new from Pennsylvania's standpoint but reminded us of two important things, namely; that a general cooperative program of wildlife conservation between the Pa. Game Commission and the 4-H Clubs, and the integration of conservation in the curriculum of State Teachers Colleges and the public schools is highly desirable. Quite a few other states are carrying on these programs very extensively and apparently with excellent success.

The Technical Sessions were many and well diversified in subject, and it was encouraging to note the large number of well trained young men who attended them. Apparently the number of such men in attendance was much larger than heretofore.

In summation I would say that the program as a whole was very satisfactory, especially since the General and Technical Sessions were so arranged as to avoid any conflict.

The annual banquet was unique in that there was no speaking of any character. Some exceptionally fine motion pictures were presented by Mr. Eugene Dupont, of Wilmington, Delaware, taken in the Santee marshes of South Carolina, and by Mr. John H. Storer, of Massachusetts.

Pennsylvania's

By Wilbur M. Cramer

Does trapping pay? It certainly would seem so from this bunch of bunnies caught on the Barbadoes Island several years ago.

IN the early Winter of 1927-28, officials of the Philadelphia Electric Company, operating a large plant on Barbardoes Island in the Schuylkill River at Norristown, reported to the Game Commission that rabbits had become quite plentiful on the upper part of this island, containing about 65 acres, and that the food supply was fast becoming depleted and predators were obtaining a foothold on the island and making serious inroads on the rabbit population. They requested that steps be taken to remove these rabbits as soon as possible.

As the Supervisor in charge of the field work of the Game Commission in Southeastern Pennsylvania at the time, it became my duty to take over the job of removing these surplus rabbits and curbing the perdator increase on the island. Now problems were continually arising in the field work connected with game administration, but this was indeed a real challenge to us, because at that time we did not have a supply of box traps and had to act quickly.

We called a conference of Game Protectors from Bucks, Chester and Montgomery Counties, made a survey of conditions on the island in question, and saw that many of the trees and shrubs had been "barked" considerably, also that the food supply was being supplemented with oats and corn supplied by the employes of the Electric Company. Evidence of weasels was seen on the island. There were no groundhog holes on the site, while the rabbit domain was surrounded by water on three sides and the buildings and plant of the Electric Company on the fourth. Thus, the rabbits were really hemmed in on all sides. When walking through the grass and weeds, we saw them scampering off in all directions.

The question was what method to use in order to capture them quickly. Our officers finally conceived the idea of using a wire corral with a trap at the upper end of the island and wingwalls running at sharp angles down to the water's edge. The utilities company lent us some posts for the corral and trap. We secured chicken wire and the necessary sledges and other tools, and with the assistance of sportsmen from Norristown, Souderton and Lansdale, and employes of the company, we started operations on the morning of Saturday, January 1, 1928.

The corral was built and the drive organized, beginning at the Electric Company plant and proceeding towards the trap on the upper end, or point, of the island. The weather was cold and snappy. We had more fun than any one had anticipated; really more than we had during the previous hunting season. When the drivers arrived at the trap, we were more than surprised to see the rabbits crawling around beneath the grass and weeds that had been placed in the trap, and in some places they seemed to be about three deep. We closed the entrance, removed the bunnies and placed them in suitable crates. Upon counting them, we found that this first drive produced sixty-seven rabbits. Another drive was made that day and seventy more rabbits were secured, making a total of one hundred thirty-seven rabbits for our first day's efforts.

On Monday, January 3, we assembled again for two more rabbit drives, the first one securing 44 rabbits and the second one 36. A few days later, two final drives were made and 48 more rabbits were secured, making a total of 265 rabbits from sixty-five acres. This was an average of four rabbits to the acre. We left sufficient rabbits on the island for propagating purposes during the next year, realizing that with the kind cooperation of the Electric Company officials the island would be a natural propagating area which if properly supervised and barring no interference on nature's part, would give us a "plant". There had been no hunting on this island for six years and the rabbits were in excellent condition.

Another novel experience connected with this game transfer work was the taking of crates of trapped rabbits to the Norristown shore on a rowboat. Game Protectors did not often have the opportunity to transport rabbits in boats, neither do rabbits have the unique experience of navigating waters in this manner.

A clipping from the Philadelphia Inquirer of January 3, 1928, started off as follows:

> "NORRISTOWN, January 2—Rabbit hunters inspired by humanitarian motives, leaving behind hounds and guns, captured 217 bunnies here today in Pennsylvania's first rabbit drive."

"Necessity is the mother of invention" is an old saying and a very true one. The value of a native wild game supply secured from a tract of land on which no hunting can be or should be permitted and is a natural game refuge or propagating area was thus demonstrated, not because of foresight or because it was specially planned, but because of an overpopulation of game, scarcity of a food supply, and an abundance of predators, or what we might term "necessity".

During the Fall of 1932, Reading City officials in charge of the municipal watershed, known as the Maiden Creek Dam Area, reported that rabbits were causing damage to hundreds of small pine trees with which they had reforested the watershed. They asked us to cooperate by removing these rabbits and giving them relief from the damage. We began rabbit trapping on this area during the Winter of 1932-33 on a big scale, using nets for our wingwalls instead of wire, and thus the possibility of injury to the noses of some of the rabbits was practically eliminated. Six hundred and fourteen rabbits were removed from the 2,000 acres of land in the watershed the first winter, and this area has furnished a large annual supply of rabbits for the Commission in Berks County ever since, excepting the Winter of 1936-37, which followed the unusually severe winter of 1935-36, when it was deemed advisable not to remove any rabbits at all from this area. One thousand two hundred twenty-seven rabbits were trapped on the Maiden Creek Area during the 1938-39 winter, and from present indications this number will be exceeded by about two hundred this past winter. This area has provided the Game Commission and the sportsman with more trapped rabbits over a period of years than any other similar tract of land in the State.

The Eastern Penitentiary grounds in Montgomery County, which contain about 1,400 acres, was one of the next areas turned over

Rabbit Transfer Program

Wherein thousands of cottontails are trapped and transferred annually to the sportsmen's benefit

to us for the development of a game supply. It is indeed fortunate that there are men at the head of institutions of this kind who are interested in hunting and in sportsmanship, and who are willing to cooperate with the Game Commission.

When the Pymatuning Dam was being built in Western Pennsylvania in 1931, this vast area had to be cleared of trees and other growth, so that rabbit trapping there produced a large supply of native cottontails for restocking in Crawford County. The Pymatuning Refuge has since produced a crop of rabbits and other game almost yearly. From these beginnings, it was seen that specially established game propagating areas would be most desirable, and it was decided by the Game Commission to incorporate the authority for their establishment in the Game Law.

Under Section 930 of the Act of June 3, 1937, the Game Law of Pennsylvania, a special set-up is provided whereby the Game Commission may establish state game propagation areas on and within publicly-owned or privately-owned lands within the Commonwealth upon the approval of the proper authorities. These areas are posted against all hunting so as to allow wildlife an opportunity to breed and propagate under **natural conditions**, with a minimum of human interference; from them, animals and birds may be removed by the Commission, or its agents for restocking elsewhere. Such areas are to be managed and developed as the Commission considers advisable and necessary for the successful propagation and increase of wildlife.

This represented the legal set-up long awaited. Is it not logical to take every reasonable step to raise as much game as possible in a wild state to capture and transfer to suitable hunting areas to supplement the supply from the game farms and the game purchased? Just the other night on the Major Bowes' Amateur Hour a beautiful young lady approached the microphone. The manner in which she had her hair arranged attracted the attention of Major Bowes. He asked her if she had a "permanent." She said, "No, the waves in my hair are just natural." Major Bowes then said, "If it is natural, it ought to be permanent." Is it not more reasonable to believe that the naturally propagated native game will provide more of a permanent game supply for the sportsmen of the Commonwealth than that otherwise secured? Certainly such game is superior to imported stock of doubtful value.

By January 1, 1939, or during the 1938-39 rabbit trapping campaign, there were a total of 53 State Game Propagation Areas established in the Commonwealth in 59 townships of 28 counties with 87 cooperating landowners with a total of 20,754 acres. The question is what will these areas produce over a period of years. Judging from the few natural propagating areas from which we had been removing game in southeastern Pennsylvania for the past ten or more years they will be the sources of an annual natural supply of game that will mean much toward solving the restocking problem.

The Game Commission in 1937 felt that if this game trapping work was so successful in the thickly congested southeastern counties, or Division "A", of the Game Commission, it ought to work well on a statewide basis. To that end the beginning of a general statewide trapping program was made during the fiscal year of 1937-38. Up to this time nearly all of the rabbit transfer work within the State had been done in Division "A". The total number of rabbits transferred in the State beginning with June 1, 1933 was as follows:

Year	Number
1933-34	1,676
1934-35	2,026
1935-36	1,902
1936-37	719
1937-38	5,853

The splendid results of these early efforts showed the possibilities of the development of the rabbit transfer program on a statewide basis. It was found that humane live traps could be made by the NYA at their workshops and the only cost to the Game Commission would be the purchase of the materials. This work would also provide employment for worthy young men. Rabbit box traps and rabbit carrying or holding crates were made for the Game Commission by the NYA during the past three years as follows:

Year	Rabbit Traps
1937-38	4 861
1938-39	9,320
1939-40	6,000
Total	20,181

Year	Rabbit Carrying Crates
1937-38	250
1938-39	507
1939-40	1,000
Total	1,757

The average cost of the rabbit traps has been about 35½c each and that less of the carrying crates 93 1/3c each.

The Commission authorized the development of extensive rabbit transfer work beginning with the winter of 1938-39. Three hundred eighty special agents were appointed to assist the Game Protectors in this work. Some of these agents were deputy game protectors, while others were interested sportsmen. The cooperation of sportsmen's organizations was solicited in many counties. The rabbits captured were to be released in the county where taken. It appeared that it would only be a question of time until the purchase of rabbits from the western states would no longer be possible, and the possibility of importing disease would be avoided, if a local natural rabbit supply could be developed.

Rabbit transfer on a big scale was started during the winter of 1938-39 with box traps, and the conducting of rabbit drives through the use of nets. Bait used in the box traps included apples, carrots, alfalfa hay, rabbit chow, prepared horse feed, corn on the ear and even frozen sweet cider. The records show that a total of 22,980

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The most popular and practical method of trapping rabbits is to spread the nets in V-shape converging in a corral.

HOW TO BETTER SELL

By Hon. A. Willis Robertson

Courtesy Fish Commission

Each spring some 13,000,000 fishermen pack up their troubles in the old kit bag.

MR. CHAIRMAN, ladies and gentlemen of the conference, this splendid assembly of conservation officials and nature lovers has met here today to discuss how we can better sell wildlife to the people. I have contended for the past 30 years, and still contend, that you can't sell anything to anybody by force, not even the old watering trough to the horse. And you can't sell anything to most of us in the absence of a personal profit motive. There is no difficulty about selling this program to the fifteen million or more who hunt and fish. Selling it to an equal number of landowners is a horse of another color. Are they expected to furnish better hunting and fishing free? And if not, what is their profit motive to induce them to cooperate? The only effective sales campaign is education. Our manufacturers and our merchants learned that fundamental principle many years ago, and annually spend millions of dollars through the newspapers and through broadcasting stations in advertising their goods, wares, and services.

Conservationists have been slow to grasp these principles, due, no doubt, to the erroneous belief in many quarters that our wildlife resources were inexhaustible and we need take no thought of the morrow. But when the topsoil of the "dust bowl" began to blow into our Capital City; when we had to send to Canada for lumber for our homes; when we had to send to Japan and Russia for fish; when we had to go 100 or 200 miles to get unpolluted drinking water for our big cities; when we sat in a duck blind all day repeating the lines, "Vainly the fowler's eye might mark thy distant flight to do thee wrong"; when we visited our favorite stream and returned with nothing except the classical fisherman's luck, public-spirited men like Jay Darling, Tom Beck, Harry Hawes, Fred Walcott, Senator Pittman, and a few others, whose names will ever be inscribed on the hearts of every nature lover, began telling the American public what was actually happening to a once glorious natural resource. And at long last the program of education started.

The first essential step in that educational program was the organization of the National Wildlife Federation. I do not minimize the educational work done by the Audubon Society, by the American Game Conference, by many other smaller conservation organizations, and by the various State game and fish departments; but it remained for the National Wildlife Federation to tackle the problem of reaching on a national scale the "grass roots," so to speak. Most of our best species of small upland game find their habitat in cultivated areas, and 1,000,000,000 acres of such areas in this country are privately owned. For many years hunters had been gathering at their city clubs or mountain lodges and engaging in wistful wishing for a return of the good old days, but few of them had read the inscription on the flyleaf of an old book: "He who learns and learns and does not as he knows, is one who plows and plows but never sows." And still fewer had read with an understanding heart the words of Samuel: "I heard the voice of the Lord saying 'Whom shall we send and who will go for us?' and I said, 'Here am I, Lord, send me.'"

Each spring some 13,000,000 fishermen would pack up their troubles in the old kit bag along with their fishing tackle and go to some mountain area where massive peaks invited the heavens to rest upon their stately columns, where majestic oaks that had survived the vicissitudes of the elements could teach how to clasp with tougher roots the inspiring earth, where sparkling streams concealed in limpid pools the elusive trout, and where they could catch the personal inspiration of the lines: "To him who in the love of Nature holds communion with her visible form, she speaks a varied language; for his gayer hours she has a voice of gladness and a smile and eloquence of beauty, and she glides into his darker musings with a mild and healing sympathy that steals away their sharpness, ere he is aware."

But that was not putting any fish into a depleted stream. Each fall seven and a half million hunters would pay thirteen and a half million dollars for hunting licenses, as well as a million dollars for duck-stamp licenses, to pursue their favorite type of game, but that was not bringing into the conservation picture the owners of that 1,000,000,000 acres of farm land, except as silent sufferers of careless hunters or wilful trespassers. Neither was it bringing back the flight of the ducks, which in 1935 had reached the all-time low of 30,000,000, the deer, and turkeys that had completely disappeared from many of their favorite haunts; nor the cheery call of the Bobwhite to the fence posts from which they had disappeared.

To reach the grass roots as a foundation upon which to build a constructive national program, this splendid organization set out to enlist in its active membership the farmers and landowners of the country as the first step in an educational program. Hand in hand with that private undertaking went a greatly quickened interest in conservation by the Federal Government. So much so that recently the Secretary of the Interior announced that during the past seven years the Federal Government had made greater progress in conservation than during the entire previous history of the country.

The first undertaking of these private and public agencies, working hand in hand, was to let the people know the present balance to their credit, since the title to all wildlife is held by the States in trust for the people, with the exception of migratory birds, which are held in trust for the people by the Federal Government under its treaty-making powers). That inventory on the debit side showed thousands of miles of polluted streams, millions of acres of burned-over forest lands, millions of acres of farm lands so badly eroded as to produce neither food nor cover for wildlife, the total disappearance of some valuable species, and great reductions in the supply of others. On the credit side it showed that the people of this country owned 26 national parks, with a total of 25,000,000 acres; 158 national forests with a total of 175,000,000 acres and 173,000,000 acres of public domain, all now being administered with a view to wildlife conservation, not only to preserve what we now have but to increase the supply for the future use and enjoyment of the people.

The Congress passed a bill to impose a Federal license on migratory bird hunters to produce a fund for the acquisition and main-

Co-author of the famous Federal Aid in Conservation Act

tenance of migratory bird refuges; it passed a bill to earmark the 10 percent excise tax on arms and ammunition for the development as grants-in-aid to the States for the development of upland game. It created a select committee of the House to study conservation problems from a national standpoint, to coordinate Federal conservation activities and to recommend necessary or desirable legislation. The Congress created the Civilian Conservation Corps that has built over 4,000 fish-rearing ponds, planted food and cover on 54,251 acres, reforested 1,300,000 acres, and improved fishing conditions in streams to the extent of 6,135 miles. It created the Resettlement Administration that purchased 9,200,000 acres of submarginal land, much of which is now being devoted to wildlife conservation. The Congress created the Soil Conservation Service which has 526 projects in 45 States, with 57,003 farm owners cooperating in the retirement of 683,497 acres of land from soil-depleting crops, strip cropping an additional 1,084,812 acres, and doing hillside terracing to prevent erosion to the extent of 74,249 miles. The Soil Conservation Service has built 3,707 storage dams impounding 80,000 acres of water. The Congress has appropriated vast sums to the W. P. A., of which $227,000,000 have been expended on conservation projects, including the expenditure of $500,050 on fish hatcheries for the Bureau of Fisheries, supplemented by an allotment of $808,500 from the P. W. A. And that type of W. P. A. activity will be continued through the current year, improving existing Federal hatcheries and the fish-cultural facilities in the Yellowstone and Glacier National Parks, and a new pond fish hatchery in Alabama.

The Congress during the past 7 years has made relatively liberal appropriations for the operations of the Bureau of Fisheries, which has been making splendid progress not only in the improvement of scientific-management plans but in the actual improvement of fishing conditions through the annual distribution of some 8,000,000,000 fish, many of which were reared to legal size before being planted in the streams and ponds. The Bureau of Fisheries hopes it has saved the salmon industry on the west coast by designing practical and successful fishways to move the salmon to their spawning beds in the Columbia River past the Bonneville, Rock Island, and Grand Coulee Dams. Approximately a million salmon

May pictures such as this be ever reminiscent of our efforts to preserve wildlife for future generations.

mals, from which our trappers derive an annual revenue of about $65,000,000. They have educated the people to the value of insectivorous birds on the protected list, more than 50 of which make war on that enemy of the cotton farmer, the boll weevil. And they have told us that the bobwhite of the Southern States include in their normal diet 50 kinds of insects that are agricultural pests. The Biological Survey has also shown great zeal and a commendable understanding of local problems in the administration of the Pittman-Robertson Act, under which 167 restoration projects have

WILDLIFE TO THE PEOPLE

have ascended these fishways during the two seasons of their operation. The successful administration of the fisheries of Alaska have maintained an average yield of 6,500,000 cases of salmon during the past decade. The fur-seal herd of the Pribilof Islands has been increased from 130,000 animals in 1910 to about 2,000,000 animals at the present time and during the 30-year period in which the Bureau has managed this valuable resource 900,500 skins have been obtained. After 3 generations of careful selection, the Bureau, at its Pittsford, Vt., hatchery produced a type of brook trout that grew so rapidly they spawned a year earlier than wild stock, yielded double the number of eggs and were more resistant to disease. The restocking activities of the Bureau have been centered on the national-park and national-forest areas, which are under Federal control and open to the public, the prince and the pauper on equal terms.

The Congress has, likewise, supplemented the duck stamp and Pittman-Robertson Act funds to the Bureau of Biological Survey with the appropriation of sufficient funds to acquire approximately 12,000,000 acres of areas suitable for migratory birds, principally ducks and geese. As a result of that program, coupled with a wise restrictive shooting program, our supply of ducks has been increased 100 percent since 1935, to my mind the most remarkable recovery of a threatened specie in history. But let no one assume that recovery is a signal for letting the bars down to a million hunters since the present supply of ducks in this country is only a fraction of what it once was, and far below the population of 120,000,000 birds which we should have before we can say we have brought back the ducks. The Biological Survey has made a valuable contribution to the preservation of domestic fur-bearing ani-

been started in 42 States at a cost of $1,350,000. And that program will be stimulated by the Federal appropriation this year of $1,000,000 more than was appropriated last year for the same purpose. The engineer of that outfit, Ira N. Gabrielson, has had his hand on the throttle and his eye on the rail.

Time will not permit me to elaborate upon the splendid accomplishments of the National Park Service under the leadership of Arno B. Cammerer, or the United States Forest Service under the leadership of that outstanding forester and beloved man, the late F. A. Silcox. It is more important for me, as a legislator, to hear the views of the delegates to this conference than it is for me to recount at length what has been done by the Federal Government. Yet reference to what the Federal Government has done is necessary in any program of education to better sell wildlife to the people. Knowledge of what needs to be done and knowledge of what is being done, coupled with a vision of what can be done, should quicken and stimulate public interest and public cooperation. In conclusion, my friends, I wish to touch briefly on another phase of this educational program to sell wildlife to the people, and that is the opportunities it offers to the people to find peace and contentment, now a stranger in many hearts. While the foreign situation is a subject of absorbing interest and, of course, vital concern, we must not let it obstruct the seriousness of our domestic problems. We have many unemployed men and women; we have class antagonisms; we have some un-American and subversive activities; we have many who think that the principles of a democracy should mean equality of property instead of equality of opportunity. We have many who do not realize that content-

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COTTONTAIL NESTING STUDY IN PENNSYLVANIA

By JOHN D. BEULE*

ALTHOUGH management of cottontail rabbits (*Sylvilagus* spp.) has advanced rapidly in recent years, the fundamental reproductive and nesting activities of these animals have to a great extent remained obscure. The difficulty with which cottontail nests have been found has generally limited previous studies to nests found accidentally. A study of the nesting habits and juvenile mortality of cottontails has been carried on by the writer as part of a management investigation of these animals in Pennsylvania since July 1, 1938. This paper is a preliminary report on the nesting habits of the Mearns cottontail *(Sylvilagus floridanus mearnsi)*. All specimens collected and examined were identified as *Sylvilagus floridanus mearnsi*, but it is possible that some of the nests and young were those of *S. f. mallurus* and *S. transitionalis*.

The study was carried on in Centre and Lehigh Counties, Pennsylvania, under the direction of Dr. Logan J. Bennett, Biologist, U. S. Bureau of Biological Survey, and Dr. P. F. English, Associate Professor of Wildlife Management, Department of Zoology and Entomology, The Pennsylvania State College. P. E. Randall, Russell T. Norris, Tracy M. Kuhn, and Allan T. Studholme, graduate assistants at The Pennsylvania State College, helped materially in locating nests for study.

From April 1, 1939, to September 15, 1939, 25 active nests and 66 old nests were found by systematic search. This method, however, was of little value until indicators that revealed the presence of the well-concealed nests were discovered. After a number af active nests had been observed, the arrangement of dried grasses covering the nests became a useful indicator. Portions of the excavated dirt and the fur lining were sometimes visible and were clues to the presence of nests. Cottontails dug many nesting cavities that were never used as nests. The investigation revealed an approximate 1 to 1 ratio between these cavities and the completed nests. Eighty percent of the 86 unused nesting cavities examined contained materials for the outer grass lining, but none contained the fur lining.

Nesting Dates

The first active nest was found on April 6, 1939, and nesting activities continued through September 14, 1939, when a litter left the last occupied nest. Trippensee (1936) and Allen (1938) reported pregnant females in January and February, respectively, in southern Michigan. Similar early records may be expected for Pennsylvania.

The importance of the nesting period before April 1 is not known, as field work began on that date. Young cottontails, however, were seen in March 1939. Nesting activities were under way in Pennsylvania on the 1st of April, and the peak of nesting activities was reached late in May and early in June. From May through September the number of nests found was progressively smaller when figured by months (table 1). During August few nesting data were obtained because the writer was absent from the study areas. A number of young cottontails that were caught in box traps during September showed that nesting activities continued throughout August.

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Location of Nests

When choosing a nesting site, cottontails often left their favorite haunts of dense shrubs for the adjoining open meadows and fields. Perhaps the nests were placed where mammalian predators would be least apt to travel. The study thus far has not revealed any avian predator as a destroyer of cottontail nests. The location of nests with reference to cover types is presented in table 2.

Description of Nests

The nest of the cottontail was arranged in a cavity in the ground, presumably dug by the female in most cases. An outer lining of vegetation and an inner lining of fur were placed in the shallow hole.

TABLE I. **Nests and litter counts obtained by months**

Month	Nests found	Litters examined	Average in litter
April	2	2	6.0
May	44	8	6.1
June	22	8	5.8
July	17	4	4.5
August	2	2	3.5
September	4	2	4.5
Totals	91	26	5.42

TABLE 2.—**Location of cottontail nests**

Location of nests	Number of nests
Wastelands	32
Alfalfa	13
Orchards	8
Hayfields (containing timothy)	7
Barleyfields	5
Wheatfields	5
Oatfields	4
Red clover	4
Roadsides	3
Woods (mixed oak and pine)	3
Pastures	3
Strawberry patch	1
Pine plantation	1
Scrub oak	1
Manure pile	1

Nesting cavities were surprisingly uniform in size and shape although several exceptions were observed. The nest shown in figure 1 was drawn from the average measurements of 49 nests. That no incomplete nesting cavities were found indicated that they were dug in a single operation.

In April and May (when green vegetation was not available) dried leaves, mosses, fine roots, and straw were used for the outer grass lining. Later in the season bluegrass and timothy were most commonly used for the outer lining although nests located in barley, oat, and wheatfields contained the basal leaves of those plants. With the exception of early nests, the materials for the grass lining were cut when green and were

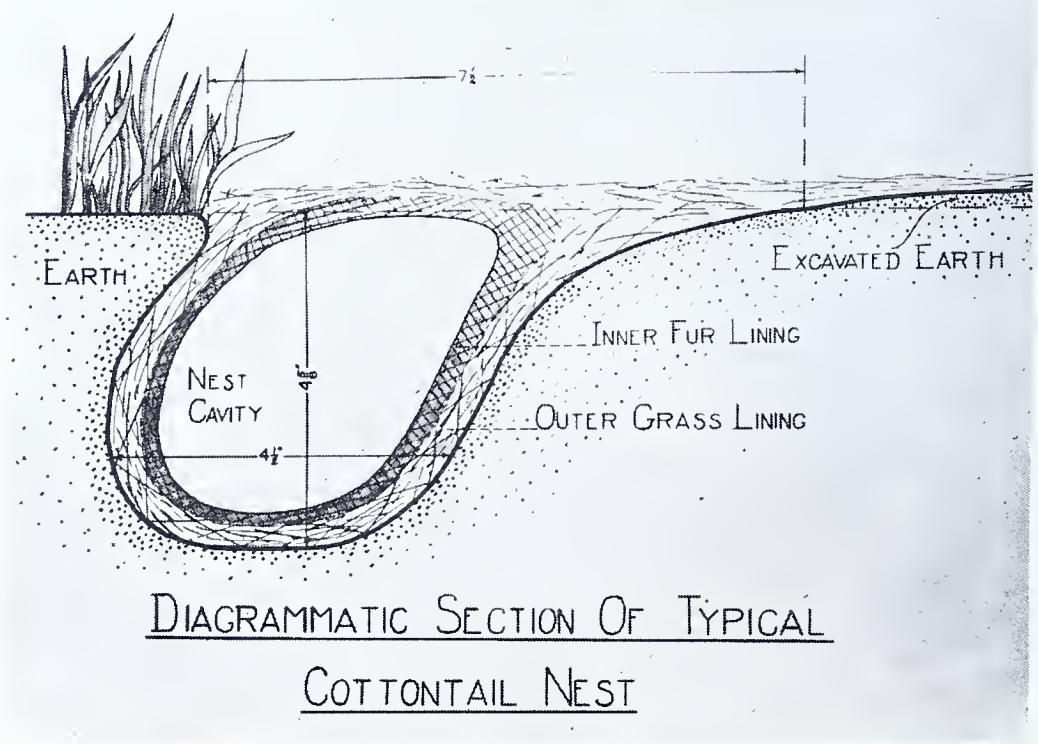


Fig. 1. Diagram of section of typical cottontail nest.

Fig. 2. Nestling cottontail parasitized by Wohlfahrtia vigil, showing entrance of larvae through anal and abdominal regions.

loosely placed in the cavity, where they dried in a few days. The nest was left in this condition from 4 to 14 days, after which the grass lining was rearranged and fur from the abdomen of the female was added. The young were born shortly after the fur was placed in the nest. After the birth of the young, more fur was added to the lining and arranged to surround them. Green vegetation was then cut and put over the conspicuous fur lining and excavated dirt. Two nesting cavities were dug 6 and 17 days, respectively, before the birth of the young.

Litter Counts

Twenty-five litters of nestling cottontails were examined during this study, and one litter count was obtained from a pregnant rabbit that had been hit by a car. Seton (1929) gave the number of young to a litter as 4 to 6 or 7 and very rarely as many as 8 or as few as 3. In Pennsylvania the number in a litter ranged from 3 to 8 and averaged 5.42 for the 26 litters examined. Large litters of 6 to 8 were frequently found during the early nesting months, but litters found after July 15, 1939, were comparatively smaller and ranged from 3 to 5 (table 1). Dalke (1937) found a larger number of embryos to the female during the early breeding months in Connecticut, but a table compiled by Trippensee (1936) showed no appreciable difference in the number to a litter throughout the entire breeding season in Michigan.

Litters in a Year

On one of the experimental areas a half-grown cottontail was caught and tagged in August 1938. On June 28, 1939, this rabbit was caught again. The condition of the genitals and the secondary sex characteristics showed that she had given birth to young about the first week in June. This was considered the animal's first litter, for Trippensee (1934) determined the breeding age of cottontails to be about 40 weeks. This cottontail was again trapped in July, August, September, and October and revealed no further nesting activities; she therefore had only one litter in her first breeding year.

Fifty young cottontails, trapped repeatedly throughout the summer and early fall, gave no indication of breeding during the first year.

Relationship between Female and Young

Ordinarily the female returned to the nest only to feed the young although she spent much time in a nearby form. Feeding hours were determined by the use of an apparatus that stopped an alarm clock at each visit of the female to the nest. One feeding period was determined to be about dusk, and a second was indicated to be about dawn. At the conclusion of each visit the female rearranged the nest and often added more fur and grasses to conceal the nest.

Trippensee (1934) cited examples of female cottontails' responding to the squeals of the young and offering protection when the latter were in danger. Once while nestling cottontails were being tagged, a squeal from one of the young caused the female to come within 3 yards of the writer, who was standing over the nest. She departed, however, when the observer moved.

No tendencies toward desertion were recorded although the young of many nests were handled daily. On one occasion there were indications that the female had moved her young to another site after the writer had made initial observations.

Nest Mortality

Mammalian predators, insect larvae, and man were responsible for the destruction of 9 of the 25 active nests under observation. In one locality skunks *(Mephitis nigra)* destroyed three nests and were partly responsible for the destruction of a fourth (table 3). These mammals, however, in other localities did not disturb nests; apparently skunks had to learn to search for nests before they became a menace. Nestling mortality attributable to skunks was difficult to determine when an entire litter was eaten at one time. Fortunately a few nests containing large litters were destroyed and the remains of several of the young were left at the nest. The predator was then caught in a steel trap the following night, when it returned for the remaining young.

TABLE 3.—**Causes of nestling mortality**

Mortality factor	Number of nests destroyed
Skunks	3
Man	3
Wohlfahrtia vigil	2
Skunk and *W. vigil*	1
Weasel	1
Mice or shrews	1
Total	11

The larvae of the flesh fly *(Wohlfahrtia vigil)* caused myiasis in nestling cottontails and resulted in the destruction of two nests. The nestlings of a third litter were infested but were taken by a skunk. Larval specimens from the young of all infested litters were identified by Dr. J. E. Shillinger, Division of Wildlife Research, U. S. Bureau of Biological Survey, and Dr. Charles T. Green, U. S. National Museum, Washington, D. C. Johannsen (1926) reported taking Wohlfahrtia larvae from young cottontails that were reared under seminatural conditions at Ithaca, N. Y. Kingscote (1935), working in Ontario, Canada, found similar infestation in 149 mink, 20 dogs, 4 cats, 4 ferrets, 2 rabbits, and 1 fox.

The manner in which nestling cottontails were thus parasitized is unknown. Under experimental conditions the larvae (which are born alive) were deposited on the host by the female fly. They immediately entered the body of the host and reached maximum larval development in 4 to 9 days (Ford, 1936). Nestling cottontails of all infested litters died just as their eyes were beginning to open, showing that all litters were parasitized at the same time in their development. The presence of second—and third—instar larvae in dead and dying cottontails indicated that the young were probably infested at birth. It is doubtful that the female flies could have entered the matted fur lining to larviposit on the nestlings. Wohlfahrtia larvae entered the nestlings from any part of the body, but the abdominal and anal areas were especially vulnerable (figure 2).

In Ontario, Wohlfahrtias were associated with railroad tracks and water. The association with railroad tracks has been explained in the laboratory by the insects' attraction to heat. In nature the warmth of the tracks after sundown attracted these insects. Exposed rocks or metal buildings were also suggested as possible attractors of Wohlfahrtias. The association with water is yet unexplained (Ford, 1932, 1936). The Ontario investigations also revealed that *Wohlfahrtia vigil*—unlike most of the related flesh flies—were flower-feeders. These insects were noted feeding on wild carrot *(Daucus carota)*, wild caraway *(Carum carvi)*, white sweet clover *(Melilotus alba)*, goldenrod *(Solidago juncea)*, and milkweed *(Asclepias* sp.).

All infested nests were found on or bordering a rocky experimental area in Centre County, Pennsylvania. With the exception of wild caraway, the plants listed above were abundant in this region. Numerous exposed rocks on the area may also have influenced the presence and abundance of Wohlfahrtias.

In Ontario these insects were found from the last week in May to the last week in September. They may, therefore, be a potential mortality factor for nestling cottontails throughout the greater portion of the nesting season. The dates of parasitization in Pennsylvania were May 31, July 12, and July 22, 1939.

The remaining three nests were destroyed by man. Sportsmen removed two litters from supposedly deserted nests, and all the young died. The third nest—located in a badminton

(Continued on Page 28)

Fig. 3. Young cottontail out of nest two days previous to its final departure.

A Grouse Shooting Movie » » Almost!

By C. W. Baumgardner

ONE evening last November, near the end of the grouse season, Doc called at my home to make arrangements for a grouse shooting trip the next day, using both the guns and movie camera. Doc, by the way is a druggist in our little town of Windber, Pa.

The next morning he stopped and picked me up in his Model A flivver, which he keeps just to haul his hunting friends and dogs out over the rough mountainous roads to his pet shooting grounds.

Doc's wife was along with the movie camera to shoot some pictures of Doc and I as we were attempting to shoot some grouse. After a rough, bumpy ride of about five miles we finally came to Doc's favorite parking place.

To be sure that we would have a chance to get some nice shots with the camera, Doc just had one of his dogs along, old Bob, who was just what the doctor ordered when it came to finding and pointing ruffed grouse.

We had hardly started away from the car, when Doc's wife called for us to wait until she could get the camera loaded. Right here is where Doc's temperature started to rise a little, as he complained that is just what he expected, to have to wait and fool around with his wife and camera all day. But he later found out he was all wrong about his wife as she kept pace with her husband and I all day, in fact she had to wait for Doc, with his 225 pounds, to catch up several times in the late afternoon.

We had covered about a mile of good grouse territory, when the lady called "point". Bob had the bird under a little pine, and as Doc and I came up it flushed. It went out on my right and when out in the open I managed to knock it down. I then turned around very careful and pretty like, thinking Doc's missus had the camera running, but in the excitement of the bird flushing she had forgotten all about the camera. Doc then sat down on a stump and proceeded to tell his wife just what he thought about her coming out in the woods to take pictures and then let a little thing like a bird flushing spoil her chances for a picture.

Doc mowed it down, putting the whole load into the bird at about twelve yards.....feathers flew in all directions.

We did not go far until old Bob had another bird pinned in some blackberry briars. It flushed as I walked in, and my first shot was a little back of his tail feathers, the second hitting in about the same place. I had just reloaded the old double, when out went two more. One went to my right, which I saluted, but which sailed on over the hill, while the other went out in front of Doc and of course just to make me look bad he scored a nice clean kill. He picked up the bird and was saying what a beautiful picture that would be of him killing the bird, when his wife, quiet like, informed him that after the first bird had gone out, she was not looking for any more and had laid the camera on a log while she was fishing a candy bar out of her jacket. Poor old Doc sure felt bad. After making a nice kill he had picked the bird up and held it so it would show up nicely in the photo, thrown out his chest, and had a very nice smile on his face until he discovered his wife munching a candy bar instead of shooting a picture of her nice big husband, when the smile just disappeared.

Doc then handed his sixteen over to his better half, who is a licensed and very efficient hunter. He took the camera, all the while mumbling that if he wanted any pictures he would have to take them himself.

We flushed a pair of birds, wild, that evidently had been dusting at the base of a tree that had been blown down the previous winter.

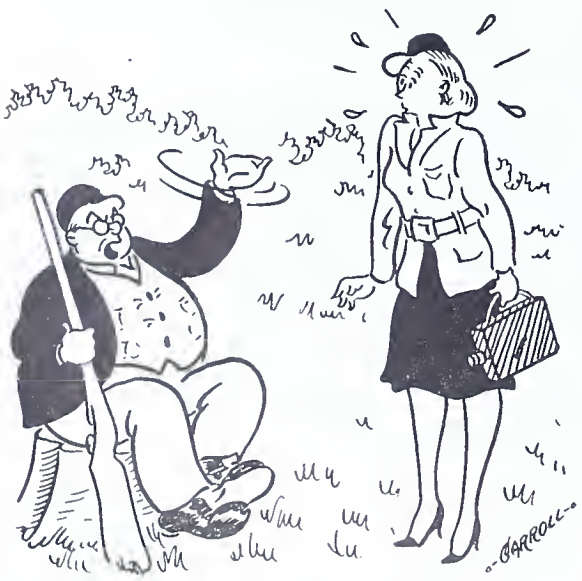
As we came to a spring, where we all rested and ate some candy bars, (Doc always has plenty of candy along), Doc took a few stills with the camera and told us how simple the camera was to operate. We started on from the spring and were working some burnt-over ground, when old Bob slid into a point under a little hemlock. Doc came rushing up with the camera, all set for his movie. I told his wife to go in and take the shot. As she started to move in the bird roared out, but he was not fast enough to beat the sixteen, as the little lady really folded him up, dropping him out in the open stone dead.

Then we both turned to Doc, the ace camera man, and there he stood with the camera in one hand, down along his side, running away taking a nice picture of his feet. It seems that he had started the camera and then when the bird flushed he just dropped it down along his side and stood and watched his wife kill it while the camera was pointed toward his feet. His wife then reminded him that she sure thought it strange that a big, cold hearted man like him would be disturbed by the mere flush of a little bird. The bird was out in the skyline and it was a perfect setup for a nice movie when the lady dropped him.

This little episode cured Doc, and he gave the camera back to his wife and he took the gun, saying the gun was too heavy for his wife to carry and seeming to forget the fact that she had killed the only bird she had a chance at. We then hunted for about two hours without seeing anything of a bird. Doc started to tell his wife that the dog was not working right and was passing up birds, but his wife insisted that there were no birds around or Bob would have picked them up. Doc and I turned down a little draw, while his wife followed the dog up the draw out of our sight.

Doc and I sat down on a log as he said it was of no use for us to tramp back up the hill as his wife and the dog was just fooling around and would be down shortly. In about five minutes we saw them coming and it was easy to see that the young lady had something to say. She mentioned that if we

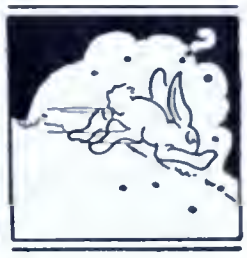
(Continued on Page 29)



Doc sat down on a stump and proceeded to tell his wife what he thought about her coming out to take pictures and then letting a little thing like a bird flushing spoil her chances for a picture.

Doc, the ace camera man, stood with the camera in one hand down along his side, taking a nice picture of his feet.

SPORTSMEN'S QUERIES



By CHAS. F. STAMBAUGH

DEER HUNTING WITH BOW AND ARROW

Q. If I purchased a license to hunt deer in the State Archery Preserve in Sullivan County, with bow and arrow, and killed one, would I have the right to shoot another deer under my regular hunter's license during the deer season?

L.DeA.—Susquehanna, Pa.

A. No. When you kill a deer on a special Archery Preserve in Pennsylvania, you have killed your limit of deer for the season and are not permitted to kill another of these animals. The season limit on deer is one, whether you kill it within an Archery Preserve or elsewhere. The special license giving you the privilege of hunting on the Archery Preserve does not authorize the killing of more game than that designated on your hunter's license.

* * *

SHOOTING BIG GAME ON THE ICE

Q. Is it legal to shoot a bear or a deer standing, walking, or running on a frozen lake or stream?

E.Y.—Glen Lyon, Pa.

A. Yes, so long as the animal has not broken through the ice. The Pennsylvania Game Law makes it unlawful to attempt to kill any big game animal while taking refuge in or swimming through the waters of any of the streams, ponds, dams, reservoirs or lakes; but when a deer or bear is on firm ice, he is not, of course, actually in any of these bodies of water. **However, no sportsman would shoot such an animal unless there is reasonable certainty that it can be retrieved safely.**

* * *

DEER DAMAGE TO MOTOR CARS

Q. Recently while traveling east on Route 22 a male deer jumped over the guard fence into my car, damaging the front of the car to some extent. A State officer has told me that a separate fund has been set aside by the Game Commission for such cases. The estimated cost of repairing the car is $11.00. Will the State pay this damage?

H.S.S.—Altoona, Pa.

A. There is no law in Pennsylvania today under which it is possible to reimburse you for the damage sustained to your car. You have apparently been misinformed, as there is no special fund set aside by the Game Commission or any other branch of the State Government for the payment of damages of this nature.

AUTOMATIC PISTOL FOR TARGET SHOOTING

Q. Is it possible to get a license for an automatic pistol, if the pistol is to be used only for shooting at targets?

G.B.H.—Kane, Pa.

A. Yes, it should be possible for you to obtain a permit to transport an automatic pistol for target shooting, from the Sheriff of your County. There is nothing in the Game Law to prohibit the use of a pistol of that type to shoot at targets other than wild birds or wild animals. The above permit may cost $1.50, but we know of no good reason why you should not be able to obtain one by making proper application to your Sheriff. Authority for issuing a permit of this kind is found in the Firearms Act of 1931. This Act is now a part of the Penal Code approved June 24, 1939, Act No. 375.

* * *

SHOTGUNS

Q. Were the first double barreled shotguns built with the barrels side by side?—W. M. M.

A. The first successful double shotguns were built with the barrels over and under, and not side by side, and were invented about 1616 by one Guilliana Bossi, of Rome. In 1784 double shotguns were described as a novelty.

* * *

PERMIT TO SELL PHEASANTS

Q. Having a permit to keep pheasants, I would like to know if you need a permit to sell them.

J.R.—Johnstown, Pa.

A. You will not need a permit to sell ringneck pheasants to the Game Commission, but if you wish to sell either the pheasants or eggs elsewhere, you will require a game propagating permit issued by the Game Commission for a fee of $5.00 a year.

* * *

POSSESSING PROTECTED HAWKS ALIVE

Q. Please grant me a permit to possess a duck hawk alive that was brought in from Maryland.

Z.S.R.—Harrisburg, Pa.

A. Sorry, but the possession of any protected birds alive in Pennsylvania, including hawks, regardless of where they are obtained, is contrary to law, and the Game Commission does not issue permits for the live possession of any protected hawks or other protected birds.

UNDER-WATER SETS FOR MUSKRATS

Q. May one set a trap in a hole, for a muskrat or beaver, which is under water?

R.P.S.—Jersey Shore, Pa.

A. Yes. It is now permissible by law to set traps in holes **under water** for muskrats, beavers, or any other fur-bearing animals in season. Under all other circumstances, however, the law requires traps to be set five or more feet from holes.

* * *

TRANSPORTING GUNS FOR HUNTING

Q. (1) What is the law concerning the transportation of a shotgun or rifle in an automobile when going hunting?
(2) Must my gun be taken apart when I haul it in an automobile or when walking along a State highway?
(3) Must my gun be placed in a gun case to haul it in an automobile?

R.H.S.—Tyrone, Pa.

A. (1) A loaded shotgun or rifle may not be transported in an automobile for hunting or any other purpose in Pennsylvania. **All shells must also be removed from the magazine.** There is no restriction upon the transportation of unloaded shotguns. (2) Unloaded rifles larger than .22 calibre long rifle when transported at night must either be carried in a case or taken apart and securely wrapped. Guns ordinarily used for hunting need not be taken apart when carried on foot along a State highway.

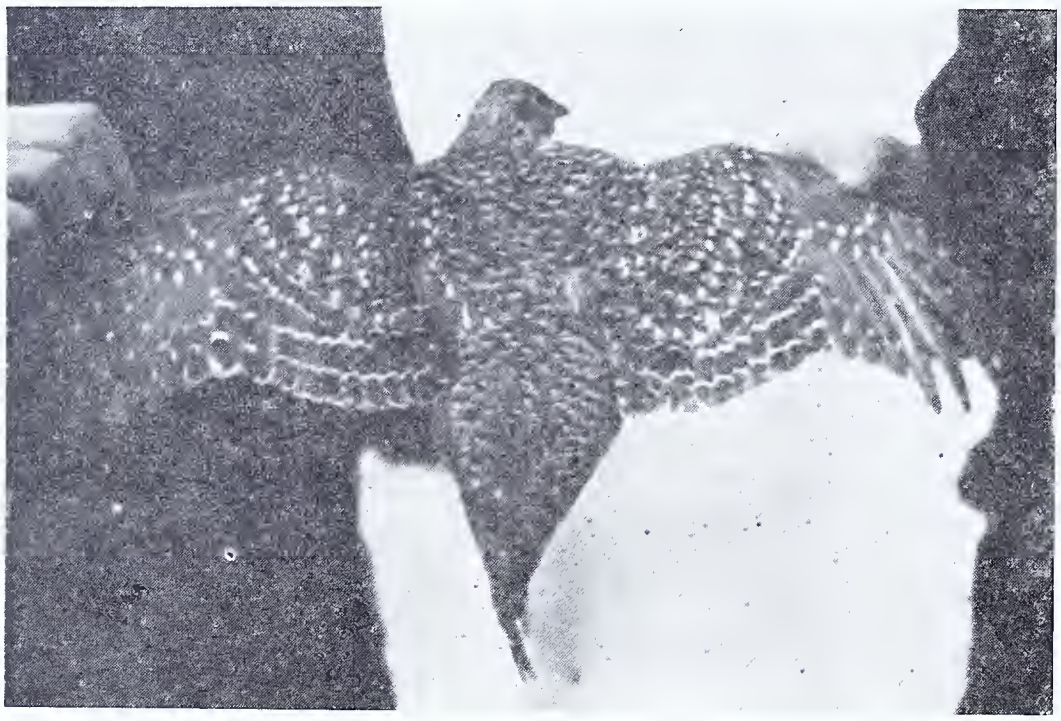
* * *

TAGGING DEER FOR TRANSPORTATION

Q. On the hunting license it states you have four hours in which to tag a deer, but it also states the tag must be attached before transportation in any manner. Does this mean you must tag the deer before you drag it out of the woods? That is, must you tag it if you take it out before the four hours are up?

R.B.—Robinson, Pa.

A. Our interpretation of the law on transporting deer is that in order to transport big game in a motor vehicle or train of any kind, it must be tagged prior to such transportation. However, when a deer is killed in the woods, you have four hours to tag it providing you do not place it in a vehicle before that time; but should you desire to transport it on wheels prior to the fourth hour, you are required to tag the deer immediately prior to transportation.



The Sharp-tailed Grouse in the above photo is one of a consignment of around 500 birds which will have been liberated this spring on cut-over lands in northwestern Pennsylvania. The Commission exchanged Ckokan Partridges for the birds, which were live-trapped in Saskatchewan. It is hoped they will acclimate themselves in that part of the Commonwealth.

RED FOX BOUNTY FOR NORTHERN COUNTIES

To encourage the sportsmen and trappers in certain northern and northwestern counties to put forth special efforts to reduce the current over-abundance in the numbers of red foxes, the Commission at its meeting April 18, 1940, decided to pay a bounty of $4.00 on red foxes killed on and after July 1, 1940 in three of its field administrative divisions.

On the basis of a recent statewide survey of fox conditions made by the Commission's research workers, operating under Federal Aid Funds, it was found that due to economic conditions, the absence of experienced fox trappers in certain large areas, and unusually low prices paid for red fox pelts, these animals have increased annually in certain sections during the past three years.

Bounty will be paid only for animals killed in a wild state in Division "C", composed of the counties of Bradford, Columbia, Lycoming, Montour, Northumberland, Snyder, Sullivan, Tioga and Union; Division "E", composed of the counties of Cameron, Centre, Clearfield, Clinton, Elk, Jefferson, McKean and Potter; and Division "F", composed of the counties of Butler, Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango, Warren, **on and after July 1, 1940 and continuing through to March 31, 1942, inclusive.** No bounty will be paid for red foxes killed in any other part of the Commonwealth, or for animals reared or held in captivity. Any person making a fraudulent claim is liable to a penalty of $100.00.

It is difficult to anticipate how many red foxes might be presented from the counties named during the first year. The licensed fur-buyers for the entire state for the fiscal year 1937-1938 purchased slightly over 4,600 red fox pelts, and for the 1938-39 fiscal year almost 6,000. The purchases for the current fiscal year may be still higher, but the total will not be known for several months.

For the current fiscal year, which ends May 31, the Commission has already paid bounties on more than 10,000 gray foxes at $4.00 each for the entire Commonwealth, and apparently the total number of gray foxes presented this year for bounties will run at least 1,000 more than for the previous year.

Gray foxes have not been found in large numbers in most of the counties where a bounty is temporarily to be paid for red foxes, but these animals have within the past ten to fifteen years been increasing in what was formerly red fox country only.

Under the law, all claims for bounties must be submitted to the Commission within four (4) months from the date of killing to be eligible for payment, and must be presented in the manner stipulated by Section 1103 of the State Game Law.

BOUNTY PLACED ON RED FOXES IN CERTAIN COUNTIES

(OFFICIAL RESOLUTION)

The Commission, after careful consideration of reports submitted by research workers, field officers and others, upon motion made, seconded and agreed to, adopted findings of facts and resolutions with rules and regulations placing a bounty on Red Foxes in certain counties, as follows:

(a) Findings of Facts—On the basis of a recent statewide survey of fox conditions made by research workers, and information and reports obtained from field officers and numerous other sources, the Pennsylvania Game Commission finds as facts:

1. That Red Foxes have increased materially in certain counties during the past three years due primarily to (a) peculiarly favorable conditions throughout large portions of the species' natural range, (b) the absence in certain large areas of sufficient numbers of experienced fox trappers to exert proper control over the species, and (c) general economic conditions which have resulted in unusually low red fox pelt values, thus tending to reduce the number of animals taken for their fur;

2. That in all the counties embraced within the Commission's field administrative divisions "C", "E" and "F", said Red Foxes, due to their current abundance, are believed to be destroying game birds and animals to an unreasonable degree, and their numbers should be reduced in order to protect said game birds and animals;

3. That Gray Foxes, animals not found in large numbers in most of the counties within said field administrative divisions until recent years, seem to have been increasing in many of the counties in question because hunters and trappers have not been sufficiently encouraged to keep the numbers of Red Foxes in check; and

4. That the most effective way to bring about a prompt reduction in the numbers of Red Foxes and to discourage the further spread of Gray Foxes in the counties embraced within said field administrative divisions is to pay a reward or bounty for the killing of Red Foxes during a limited period.

(b) Resolutions Fixing Bounty on Red Foxes; Rules and Regulations—WHEREAS, The Pennsylvania Game Commission of the Commonwealth of Pennsylvania is of the opinion that it is desirable and necessary for the better protection of game birds and game animals to pay rewards or bounties to encourage the killing of certain additional predators in the counties embraced within its field administrative divisions "C", "E" and "F" for a temporary period;

1. THEREFORE, BE IT RESOLVED, That the Pennsylvania Game Commission of the Commonwealth of Pennsylvania, acting under the powers and authority vested in it by the provisions of Article XI, Sections 1101 and 1102, of the Act of Assembly approved June 3, 1937 (P. L. 1225), entitled, "An act concerning game and other wild birds and wild animals; and amending, revising, consolidating and changing the laws relating thereto", upon motion made, seconded and adopted at a regularly called meeting held this 18th day of April, 1940, hereby offers and agrees to pay a reward or bounty of Four Dollars ($4.00) for each Red Fox killed in a wild state on and after July 1, 1940 and continuing through to March 31, 1942, inclusive, unless this action shall be rescinded or changed prior to the conclusion of said period, in the Commission's field administrative divisions and counties as follows:

Division "C", composed of the counties of Bradford, Columbia, Lycoming, Montour, Northumberland, Snyder, Sullivan, Tioga and Union;

Division "E", composed of the counties of Cameron, Centre, Clearfield, Clinton, Elk, Jefferson, McKean and Potter; and

Division "F", composed of the counties of Butler, Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango and Warren;

said reward or bounty to be paid only when the skins or pelts of the animals killed are presented in the manner and under the conditions stipulated in the act aforesaid; and no reward or bounty shall be paid for Red Foxes which were not killed within the counties named, or which were reared or held in captivity.

2. BE IT FURTHER RESOVED, That the foregoing resolutions and rules and regulations shall be

CURRENT TOPICS

duly published in accordance with the provisions of Section 1102 of Article XI of the act aforesaid in the May and June, 1940, issues of the PENNSYLVANIA GAME NEWS, the first named issue of which will be off the press on or before May 1, and this declaration of a bounty on Red Foxes shall also be brought to the attention of the public through other available channels, the Executive Director of the Pennsylvania Game Commission being hereby authorized and directed to certify these resolutions and rules and regulations as and for the act of the Pennsylvania Game Commission.

I hereby certify the above to be a full, true and correct copy of the resolutions establishing a bounty on the Red Fox in certain counties from July 1, 1940 to March 31, 1942 inclusive, as adopted by the Pennsylvania Game Commission at a meeting held April 18, 1940; and that such action as it affects the several counties of the Commonwealth is hereby published as required by the Act hereinbefore cited.

SETH GORDON, *Executive Director, Pennsylvania Game Commission.*

GIVE WILDLIFE A "BRAKE"

Give wildlife a "brake" on the highways. J. Hansell French, of Montgomery County, said that he counted 53 dead rabbits and four dead pheasants on April 4 during a 217-mile circuitous trip from Collegeville to Bloomsburg and return.

Another report submitted by D. L. Miller, Highway Superintendent, Franklin, Pa., shows that between January 3 and March 3 inclusive a total of 230 head of game and other birds and animals were killed on the highways of that county as follows: Rabbits 170; squirrels 2; skunks 11; deer 5; opossum 1; grouse 4; quail 2; ringneck pheasant 1; cats 18; and dogs 16.

Wildlife is too valuable, both economically and recreationally, to waste it by carelessness no matter what form that carelessness might take. Slow up, dim your lights!

PROSECUTIONS

Game law violators within the Commonwealth contributed approximately $67,000 to the Game Fund from June 1, 1939 to March 31, 1940. While most of these violations were of a minor nature, a number of persistent violators, especially jacklighters, were apprehended. March prosecutions totalled 122 and the penalties collected amounted to $3,417.50.

PRELIMINARY GAME KILL

(Hunters Commended)

High tribute was paid to the sportsmen of the State by the Game Commission at its quarterly meeting on April 18 for their wholehearted cooperation in submitting their game-kill reports promptly. The game law requires these reports to be submitted at the end of each hunting season; failure to do so makes the negligent nimrod liable to a $2.00 penalty.

A total of 589,734, or 89½% of all the 1939 licensed hunters in the Commonwealth submitted their reports without reminder notices. This was 9½% higher than in 1938, when 80% of them filed their reports early, and 20½% higher than in 1937 when only 69% responded. These figures show an average gain of 10% per year since 1937, when the present law went into effect. It is believed that when the responses from delinquents who are now being notified are tabulated the excellent record of 98% for 1938 may be surpassed.

All of the report cards received so far this year have been thrown into the hopper and carefully tabulated, and while subject to slight errors the figures finally arrived at sum up the kill by the license holders as accurately as it can possibly be arrived at. It was very interesting to note the comparative estimates of field officers against the actual tabulation. In the past the sportsmen were of the opinion that field officers always estimated too liberally, whereas the actual tabulation has proved in all but a few minor instances that their estimates have been too low.

The hunters who have so far reported for last year, by actual tabulation, (figures in parentheses are based upon reports from 98% of the hunters for 1938) show that the 89½% bagged 3,539,279 cottontail rabbits (4,263,759); 882,626 squirrels (1,106,914); 36,280 raccoons (36,046); 4,912 wild turkeys (6,766); 221,790 ruffed grouse (224,479); 432,628 ringneck pheasants (517,280); 102,473 quail (109,891); 37,794 woodcock (50,085); 5,694 shorebirds (8,717); 42,090 blackbirds (78,613); 2,149 wild geese (1,650); 33,843 ducks (19,679); 169,397 woodchucks (145,528). The final totals, available after the remainder 10½% of the missing reports are obtained, will undoubtedly be considerably higher, but somewhat lower than for 1938, which was an exceptionally good season.

The kill of deer greatly exceeded the Commission's early estimates, 46,616 legal males and 13,677 legal antlerless deer already having been counted. The previous high record of antlered bucks was 39,347 in 1937. Antlerless deer could be hunted only the last two days of the season in four counties.

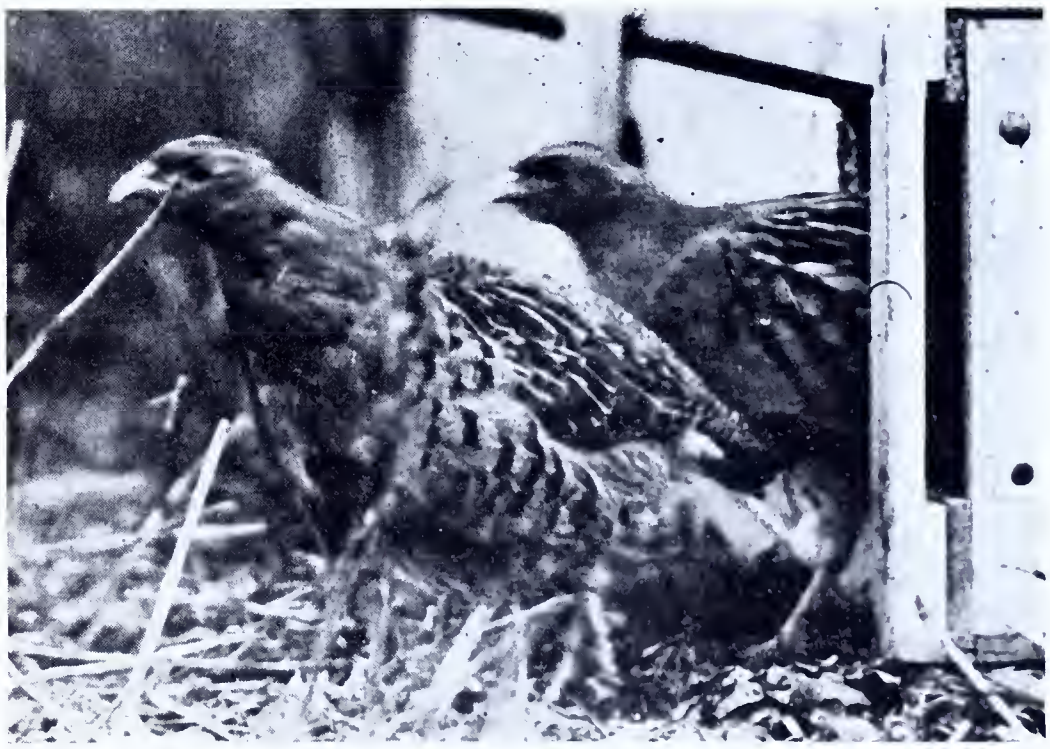
The bear kill jumped considerably over the year before, 571 of these popular large game animals having been reported taken last season, compared with 384 in 1938. A rather comprehensive check-back on these bear figures is being made, which also will provide other valuable information. Bear hunting is becoming increasingly popular as an individual sport.

WILDLIFE IN THE NATIONAL FORESTS

As of January 1, 1939, estimates placed the total number of big game at 1,841,000. This is an increase of 170 per cent since 1924. Deer—there are 1,584,000 of them—are to be found on all the 158 national forests. There are 140,000 elk on 95 forests; 58,000 black bear on 134 forests; 18,300 mountain goats on 30; 18,100 antelope on 35; 10,100 bighorn sheep on 57; and 7,280 moose on 31. Alaska brown, and grizzly bears now number 5,190 on 28 national forests. The former are found on the 2 national forests in Alaska; the latter on 28 national forests.

Estimates indicate 2,340,000 fur-bearers of miscellaneous species in the National Forests. They could be increased without major conflicts with other national-forest uses and values.

There are approximately 70,000 miles of good trout streams and thousands of natural and artificial lakes and ponds suitable for game fish in the national forests. Forest officers planted or supervised the planting of over 180 million fish in 1938. During the 6-year period 1933-38, 831,253,500 fish were planted by or under the supervision of forest officers. The C.C.C., State, and other agencies also planted many fish in national-forest waters.



Approximately 700 Hungarian Partridges were released this spring in northeastern and northwestern Pennsylvania in about equal numbers in an effort to further experiment with the liberation of these splendid game birds. If the Hun ever takes hold in Pennsylvania it will furnish fine sport for the fellow who likes fast shooting.

NOTES FOR TRAPPERS

Deer hides are a potential commercial asset.

By Douglas Wade

LOST—HALF A MILLION DOLLARS

Between the years 1923 and 1940, close to 590,000 deer have been killed legally in the State of Pennsylvania. From reliable sources, it has been estimated that only five percent (29,500) of the hides from these 590,000 deer have been tanned and used for the leather value represented. What happened to the remaining 560,500 hides is well known to most GAME NEWS readers. They were thrown away on dumps, dragged around by dogs, buried, or left in the woods. A raw pelt value of close to $500,000.00 discarded!

Section 716 of the present Game Code prohibits the sale of deer hides. This law had its inception in the days when Pennsylvania was earnestly striving to build up its deer herd from a very few animals. It was a necessary and good law then, for market and commercial hunting was still very much in evidence. Market hunting has gone the way of bootlegging—it is mighty rare. Whoever argues that Section 716 which prohibits the sale of hides should still be retained to curb illegal killing of deer, argues on a 100 to one chance. How many persons are going to kill a deer illegally for the one dollar hide when it might cost them $100 if they were apprehended?

Furthermore, the machinery for handling the sale of raw deer skins is already present among the fur-dealers. By permitting only resident licensed fur-dealers to buy and deal in raw deer hides, the Game Commission would have an excellent check on the numbers purchased and from whom and where they came. The increased income accruing to fur-dealers would materially benefit these men and their families. Furthermore, the tanning and manufacturing of deer skins into articles of use would undoubtedly give rise to several prosperous concerns within the State.

Raw deer hides at the present time have a market value ranging from 70c to $1.65. There is reason to believe that this market value would increase after the sale of deer hides is made legal.

There is no need to go into a detailed list of articles that can be manufactured from buckskin. It will serve to point out that it costs anywhere from $1.00 to $1.50 to have a deer skin tanned. From a buckskin of medium size it is possible to make three and sometimes four pairs of gloves at a cost of 90c a pair. Buckskin gloves on the retail market ought to sell for $3.00 to $3.50 a pair.

Should Pennsylvania permit the sale of raw deer hides, it is reasonable to expect that other states now prohibiting the barter of hides would follow suit, thus placing on the market a substantial supply of excellent leather. With a stable supply thus guaranteed, a whole new fashion built around the use of buckskin might arise.

Girls' and Boys' camps often teach the hobby of leathercraft. These camps would indeed welcome an inexpensive source of leather.

In summary then, is it logical that we continue to prevent the legal sale of raw deer skins? Shall we continue to toss away annually $25,000 or more? It would be far better to let the deer hunters profit to a degree, to let fur-dealers add a very desirable raw hide to their list of purchaseable pelts, to give tanneries and leathergood factories, boys' and girls' camps, clothing and fashion businesses another marketable and usable item. May be Johnny will be getting that **Pennsylvania Buckskin Jacket** he has been dreaming about, and may be Mary will be wearing that chic ensemble of shoes, purse, and hat trimmed with **dyed Pennsylvania Buckskin!**

THE Pennsylvania Trappers' Association is nigh to four years old. I'll not mention its history up to June 1939 because it is not my desire to promulgate the trials and tribulations of its past.

However, it gives me pleasure and gratification to announce to the sportsmen of Pennsylvania that the P. T. A. is now very definitely a reality. Its order is harmonious and sound, its functional movements are definite, while its curriculum is positive.

It is strictly a non-profit organization, devoted to the best interests of the Commonwealth's fur-taking public. It views with careful judgment its every move. It is especially considerate of the raccoon hunter and the fox hunter, since integrity is the foremost principle in its make-up. Its aims are strictly humanitarian, and it is my desire to inform our raccoon and fox hunting brethren that they disregard any thoughts to the contrary.

This association is just as much thoughtful of the game hunter. Its every act shall be based on moral soundness, and shall in no way be detrimental to your best interests.

On behalf of this association, I take pleasure here in expressing my sincere thanks to the delegation of the Pennsylvania Federation of Sportsmen's Clubs and to the president, Mr. John Youngman, for the courtesies extended to our delegates at the February 12 Harrisburg convention. A continuation of this policy of mutual relationship on matters of wildlife will, in the course of time, mold us into one solid league, such as does not now exist in any State, but which will eventually become a pattern for every State.

Our membership totals close to 400 at this writing. Nothing extraordinary about that, of course, when we consider that there are approximately 100,000 who engage in the annual raw fur harvest. Nevertheless, we are growing and we have confidence in the future because our sentiments are the sentiments of the majority. We hold an annual convention whereat non-members are allowed to express their thoughts. Our third annual convention will be held in Lewistown on June 29 and 30; place and program will be announced in the June issue of the Game News. $100.00 worth of trapper needs, donated to us by fur and trap companies and trappers, will be given away at this convention to those who will be the highest ranking membership solicitors.

During our last annual convention which was held in Emporium there was some talk relative to starting a monthly magazine for Pennsylvania trappers. My contention was very much opposed to even such a thought since I was certain that we could procure a page or more, when necessary, in the Game News wherein we could present our views and news and make them farther-reaching. Even before we made a requisition for a trappers' page, it was made available to all trappers. The establishment of the trappers' page deserves commendation.

The trapper is your greatest friend and ally, Mr. Game Hunter, and do not let anybody tell you otherwise. Your game con-

servation, propagation and restoration programs would avail you of little without the aid of the trapper. Confide in him for what he is worth to you, and learn to know him better.

OCCASIONALLY trappers have inquired about publications dealing with fur animals. The following list of books and bulletins may be of some help.

Probably the best all around work on fur, as well as game animals, is "Lives of Game Animals" by Ernest Thompson Seton. A four volume set of Seton's publication is now being sold by Doubleday, Doran and Company, Garden City, N. Y.

A very recent publication, reviewed in the March issue of the GAME NEWS, is "American Mammals" by W. J. Hamilton, Jr. It is published by McGraw-Hill Book Company, New York City at a price of $3.75. Any trapper wishing to get an insight into the lives, habits, and economic relations of animals would do well to plan now on setting aside the profits from several of his pelts and invest in a few authoritative publications. Hamilton's book is the latest word on mammals, is easy to read, is well illustrated, and contains a splendid chapter on fur animals.

A bulletin, "Foods of Some Predatory Fur-Bearing Animals in Michigan", issued by the University of Michigan Press, Ann Arbor Michigan, is worth the cost of 50c. It describes in considerable detail the foods taken by opossums, raccoons, red foxes, coyotes, wildcats, minks, skunks, and badgers.

Another fine state publication is "The Fur Animals of Louisiana", Bulletin 18, Department of Conservation, New Orleans. This volume is filled with trapper's and fur-buyer's lore and may be obtained for a cost of 25c.

"Guide for Trapping and The Care of Marketing Raw Furs" by Harry LaDue costs a dollar. It may be obtained from the author at St. Peter, Minnesota. Trappers will find it very instructive.

Another dollar buy is Josef Brunner's "Tracks and Tracking" published by The MacMillan Company, New York.

Technical Bulletin, 21T, "Beaver Habits" (20c) and "Trapping on the Farm", 823-Y (5c) may be obtained through the Superintendent of Documents, Government Printing Office, Washington, D. C.

The following two Farmers' Bulletins may be obtained free from the United States Department of Agriculture, Office of Information, Washington, D. C.: "Economic Value of North American Skunks" (587-F), and "The Muskrat As a Fur-Bearer: With Notes On Its Use As Food" (869-F). Only one copy to each applicant.

"Muskrat In New York" by Chas. E. Johnson can be obtained by sending 40c to the Roosevelt Wildlife Forest Experiment Station, Syracuse, N. Y.

Trappers and fur-dealers who have a serious interest in fur animals and other animals should investigate the following magazines: "Journal of Mammalogy" ($4.00 a year. Send inquiries to Wm. B. Davis, A. and M. College of Texas, College Station, Texas). "The Journal of Wildlife Management" ($3.00 a year. Send inquiries to Victor H. Cahalane, 450 Ahnaip St., Menasha, Wisconsin).

Finally, every trapper and fur-dealer in Pennsylvania should subscribe to the "PENNSYLVANIA GAME NEWS". This is an outstanding magazine value for only 50c a year. For a two-year subscription you may obtain free of charge a high-class bulletin, "Pennsylvania Wildlife" which contains 21 life-like colored illustrations of birds and mammals in Pennsylvania. The written information in this bulletin is accurate and concise.

MANY BEAVERS TAKEN

Pennsylvania trappers harvested a crop of 703 beavers during the recent season from January 15 to 31 inclusive. Not only was the season good, but prices were above average. Records indicate that as much as $30 was paid for extra large blanket beavers whereas furs in good prime were bringing anywhere from $20 to $24 per pelt. Forty years ago the beaver in Pennsylvania was exterminated, but through subsequent stocking and protection the animals increased to the point where effective methods of control were necessary. The first beaver season in Pennsylvania was established in 1934 when 6,455 were taken. Other seasons were declared as follows: 1936, 2,261; 1937, 1,222; 1938, 541; and 1939, 371.

HALF MILLION DOLLARS IN FURS

A total of 723,329 fur-bearing animals trapped in Pennsylvania were placed on the market during the season of 1938-1939. The amount paid for these animals by fur dealers totalled $580,078.38. With a good fur market, this figure normally reaches the million dollar mark.

The animals above referred to and the amount paid by fur dealers are classified as follows: Muskrats, 301,275, $249,444.09; skunks, 229,168, $168,861.18; minks, 7,858, $49,438.17; opossums, 103,516, $21,059.69; beavers, 371 $4,137.50; otters, 13, $160.00; raccoons, 28,975, $45,220.11; weasels, 38,313, $11,590.35; red foxes, 5,968, $17,715.11; gray foxes, 7,861, $12,441.23; and wildcats, 11, $10.95.

It is too early to estimate the take of furs during the recent trapping season, but the rural trappers again harvested a goodly crop. Unfortunately raw fur prices have in recent years been far below normal.

Jacob C. and Willard L. Adams, Rothville, Pa., with foxes trapped near Latonia, Tioga County. These two young men during November and early December last year caught 7 gray foxes, 3 red foxes, 24 raccoons, 21 muskrats, 14 skunks, 14 minks and 3 opossums.

CURRENT TOPICS

The Editor most humbly apologizes to William J. Marcinko, Jr., for publishing his article "The Skunk Line" which appeared on Page 19 of the April issue under the name of S. V. Sedlak. As yet he has been unable to fathom the mystery, except that it may have occurred because Mr. Sedlak also submitted a trapping manuscript at the same time and the stories and authors somehow got scrambled.

WILDLIFE SOCIETY MEETS

A joint meeting of the Northeast Section of the Wildlife Society and the Connecticut State League of Sportsmen's Clubs was held at the Bond Hotel at Hartford, Conn., on April 13th.

A number of very interesting and instructive talks and papers were presented having to do with wildlife and fish conservation, and the problem of pollution. There was a discussion of the various projects under the Pittman-Robertson program in the States covered by the Region, along with an explanation of the projects and the progress to date.

Those from Pennsylvania who attended were Dr. Logan J. Bennett, State College, Leo A. Luttringer, Jr., Richard Gerstell, and James N. Morton.

The Northeast Section of the Wildlife Society includes members of that Society engaged in wildlife conservation work in the States of West Virginia, Maryland, District of Columbia, New Jersey, Delaware, Pennsylvania, New York, and the New England States.

At the business meeting the following officers were elected for the coming year: Victor Skiff, New York, Chairman, L. J. MacNamara, New Jersey, Vice Chairman, James N. Morton, Pennsylvania, Secretary-Treasurer.

At the banquet in the evening some excellent colored hunting, fishing, and other outdoor motion pictures were shown by Eugene Wilson, Director of the United Aircraft Corporation.

New Uniforms for Game Protectors

A new type hat and overcoat will constitute the Game Protector's uniform from now on. Leather puttees and high shoes have replaced the heavy boots heretofore worn, and a light weight shirt and serge trousers will form part of the prescribed summer attire.

Secretaries of sportsmen's associations who have difficulty in getting members to report promptly at meetings might overcome these difficulties if a worthwhile door prize was offered each regular meeting night with the understanding that no member of the organization would be eligible to receive the prize unless he was present at the time the meeting was called for.

Mr. M. M. Kaufman, of Clarion, has had several thousand black walnuts in stratification (in sand) in his garden since last fall. This treatment prepares the nuts for immediate sprouting when planted, which should be done as soon as the frost is out of the ground. All persons, including boys and girls, wishing to plant one or more will be supplied, free of cost, as long as they last. To plant: Make a hole in the ground a trifle larger than the nut and two or three inches deep, drop the nut in the hole, fill up with soil, and firm the ground around it by tramping heavily over the top.

A scratching on the door of the John B. Collins home, Monongahela, the other afternoon led to an investigation. When the door was opened an animal of some kind (which later proved to be a groundhog) ran inside and dashed wildly about the room, subsequently biting two members of the family.

LOST or STOLEN: A female Kentucky foxhound from State College, Pa. One ear missing; red and blue ticked with no solid color; will answer to "Flossie". Reward for information leading to recovery.—Glenn L. Bowers, Pi Kappa Alpha Fraternity, State College, Pa.

DISAPPEARED, JANUARY 16TH, 1940—Large hound pup, 6-month-old, tan head and ears (slightly black edges on ears) short white blaze on face. Small black spot on left side of body, remainder of body entirely blue ticked, red ticked legs. Stands about 20 to 21 inches high, 16 ear inch earage. Anyone knowing the place this hound is being harbored, please forward information to undersigned. Confidential. Had name and address on collar and 1939 license 17113. Answers to name "Sandy". MARK D. KOFFEL, Telford R.D. 2, Montgomery County, Pa.

FOUND—Rabbit dog with signs of collar mark. Came to my home on March 27. I will get license for the dog, but the owner must identify sex and markings before I relinquish the animal.—Wm. B. Reedy, R. No. 1, Freeport, Pa.

Photo by Game Protector Leslie Wood, Wellsboro, Pa.

Four deer fell to their death from the rim of Pennsylvania's Grand Canyon at Falling Springs near Tiadaghton. Since January 1936 twenty-two deer have fallen from this cliff. They take advantage of deep snows to enable them to climb out on the ledges to browse but when they step on the snow-covered ice they fall nearly a thousand feet landing on the ice of Pine Creek. Photo at left shows the ledge from which they fall.

CURRENT TOPICS

Two little bear cubs deserted by their mother late in February were successfully reared on the bottle by Field Division Supervisor Jay C. Gilford, and his family. They will subsequently be used for exhibition purposes.

STATE GAME LANDS

STATE Game Land acreage is gradually increasing as land purchase contracts made by the Commission from time to time are consummated. Since last reported in the March 1940 issue of the Game News, title has become vested in the Commonwealth for use of the Game Commission for tracts listed below. They brought the aggregate area of State Game Lands to 624,922.6 acres, distributed through 57 of the 67 counties of the State.

Mrs. Hannah H. Watts conveyed 76.9 acres in Main Township, Columbia County, which became part of State Game Lands No. 58. Those lands now comprise 9,249.9 acres.

Shannon C. Weyant conveyed 1,079.5 acres in Wood, Clay and Todd Townships, Huntingdon County, added to State Game Lands No. 121, which now comprise 1,523.6 acres.

The Ambrose H. Rauch Estate, through James D. Stanford, conveyed 841 acres in Moore Township, Northampton County, on the southern slope of Blue Mountain, which tract is now designated State Game Lands No. 168. This was the Commission's first land purchase in that County.

In Warren County three tracts were added to State Game Lands No. 143, bringing the total area of those lands to 5,885.8 acres. The three tracts conveyed were:

E. Walter Anderson	125.4 acres
May Ball DeForest	108.7 "
Enoch B. Cornish, Jr.	52.0 "

Three tracts in Tioga County were added to State Game Lands No. 37, raising the total area of those lands to 8,200.7 acres. The three tracts conveyed were:

John G. Dartt	158.8 acres
Glen Stocum	201.7 "
J. C. Bailey	678.5 "

Two tracts in Schuylkill County were added to State Game Lands No. 106, bringing the total area of those lands to 1,823.6 acres. These tracts were conveyed by:

Daniel W. Kleckner	107.5 acres
William E. Groff	10.1 "

Alex O. Duane conveyed a tract of 127.2 acres in Great Bend Township, Susquehanna County, which became part of State Game Lands No. 35, now totalling 7,071.4 acres.

In Bucks County, Frederick Maxted conveyed a 5.1 acre tract on Haycock Mountain, which became part of State Game Lands No. 157, now comprising 789.5 acres. Innumerable, and sometimes almost insurmountable difficulties have been confronted in the Haycock Mountain land purchase project. The ownership of numerous small tracts, which constitute interior holdings, have not yet been determined, and some years may elapse before this project will become of much practical value to the Commission and sportsmen. However, the Commission it not discouraged. It realized the difficulties which it would encounter when the project was approved more than two years ago.

The Commission's first acquisition of game lands in Cumberland County became a reality when title was secured for five marginal farms in Upper Mifflin Township, near the new Pennsylvania Turnpike, often called the "all weather road," from Harrisburg to Pittsburgh. These five tracts, totalling 672.4 acres, and now designated State Game Lands No. 169, were conveyed by:

John S. Myers Estate	20.1 acres
S. E. Landis	164.1 "
G. R. Lay and S. R. Landis	94.3 "
Guy B. Elliott	210.9 "
Daniel P. Myers Estate	183.0 "

A total of 151 land purchase contracts aggregating about 47,900 acres are pending consummation at this time. The boundary lines of 70% of the tracts have been surveyed and the titles examined. Making settlement for the various purchases and conveying title to the Commonwealth, in 60% of the cases, depends on the promptness with which the various landowners take care of title defects reported to them after the Commission examined their titles.—W. Gard. Conklin.

STATE GAME LANDS INCREASED

State Game Lands were increased by 3,369 acres as a result of purchases made by the Game Commission at its meeting April 18. The Commission acted on 49 options totaling 20,698 acres but only approved 17. The tracts purchased lie in ten counties as follows: York, 620; Wayne, 210; Lycoming, 172; Bedford, 150; Blair, 450; Elk, 100; Butler, 53; Warren, 1100; Indiana, 296.

In all instances except York County the areas purchased were adjacent to lands previously acquired by the Commission.

"While I was enroute from Coudersport to Emporium, about 10:30 P. M. a grouse struck my automobile and fell in the road. I stopped and picked it up and found a Screech Owl attached to it. The owl had the grouse by the head and neck. I believed them both to be dead, so placed them in the car, the Owl still fastened to the bird. The next morning the owl was sitting on the back seat of the car still alive."—Deputy Game Protector Perry Stumpff, Cameron County.

According to the U. S. Forest Service there are 462,000,000 acres of commercial forest lands in the continental United States, outside of Alaska. Three-fourths of this is privately owned, of which farmers own 139,000,000 acres.

CURRENT TOPICS

State Game Farm Superintendents at Conference at Loyalsock Farm, Lycoming County recently. Left to right, Earl S. Greenwood, Supt. Loyalsock Farm; Kenneth N. Brenneman, Supt. Jordan Farm; Henry E. Metzgar, Supt. Wild Turkey Farm; Richard Gerstell, Chief, Div. of Propagation and Research; Wilbur M. Cramer, Supt. Training School; Vernon T. Warfel, Supt. Fisher Farm; and Judd Turner, Asst. Executive Director of the Commission.

NOTES FROM THE FIELD

"While trapping weasels and owls, I have had the following interesting experiences.

"I found where a weasel had killed two rabbits and dragged them into a casing under an old road. I set a No. 1½ trap and next morning I had a large weasel. Upon examination of the weasel, I discovered it had absolutely no teeth, the four incisor teeth being worn completely down to the gum line. It is rather difficult to imagine the animal killing rabbits.

"I next found another place where a weasel had killed rabbits, and set two traps, using a red squirrel as bait underneath one of the traps. The weasel removed the red squirrel without setting off the trap. Later, I caught a red squirrel in the trap and found it partly eaten by the weasel. I placed it under the trap, tying it down, and again the weasel removed the red squirrel. I then placed four traps in a small circle and in the morning, I had the weasel by the tail in one trap, rear legs in one trap, and front legs in another.

"In setting pole traps for owls, I have been setting them on top of derrick poles, putting a loop of wire around the guy wire so that when the owl is caught, he will fly up in the air and slide down the guy wire to the ground. I have caught quite a few owls in this manner and also quite a few red squirrels. One red squirrel upon being released from the top of the pole, jumped forty feet to the ground with no apparent injury.

"I neglected to mention in the first incident I spoke of where the weasel had no teeth, that the rabbits had put up a terrific struggle covering quite a large area and from the marks had evidently dragged the weasel over forty feet down the side of a ditch before they were killed.

"I have restocked the above area with rabbits and found they are getting along in excellent shape and I have been fortunate in securing lettuce, celery tops, spinach, beans and carrots from a wholesale grocery, being vegetables that are wilted and not fit for sale. I have been getting three large crates every week. Might I suggest that any other person interested contact any of these stores in their locality and see if similar arrangements cannot be made."—H. Douglas Brown, Jr., Deputy Game Protector, Oil City, Pa.

"During the past week I noticed places where snowshoe rabbits have been feeding in some plots cut for the deer."—Game Protector George H. Burdick, Cameron County.

"The boys in this section are doing a very good job reducing the skunks; they are taking anywhere from one to eight skunks out of a single den."—Game Protector Orrie E. Smith, Fulton County.

"Saw a buck deer on March 1 near Eagles Mere still carrying an eight point rack of antlers."—Game Protector Robert E. Latimer, Sullivan County.

During January officers of the Commission brought 296 prosecutions and collected $15,285.20 in penalties.

Clayde C. Markey, Leechburg, Pa., believes that a hunter would exercise a little more caution and learn to know firearms better if he was limited to the number of shells he was allowed to carry.

Officers of the Outdoor Writers Association elected at its annual meeting in Washington, D. C., March 18, include: President, Dave Roberts, Cincinnati, Ohio; First Vice-president, Ray Osborn, Austin Texas; Second Vice-President, J. Hammond Brown, Baltimore, Md.; Secretary and Treasurer, Jimmy Stuber, Columbus, Ohio.

The Directors elected are as follows: Johnny Mock, Pittsburh, Pa.; Jack Van Coevering, Detroit, Michigan; Robert Edge, New York City; Wendall A. Teague, Hartford, Conn.; Tom Ford, Montgomery, Ala.; Mike Bates, Ontario, Canada; Townsend Godsey, Jefferson City, Mo.; and Harold Devine, Toledo, Ohio.

The following interesting letter was received on March 16 from Emma Hoffner, Butler:

"Will you please look up your records back in 1913 or 1914 and see if I was not the first and only woman in the State of Pennsylvania to take out a hunter's license. I hunted two years before anyone had to take out a license and up to date have never missed a season since, and I hope I never will. I registered then as Mrs. L. H. Hoffner or Mrs. Louis H. Hoffner. Now I register as Emma Hoffner, but I am one and the same Mrs. Hoffner. I always registered from my present address, 228 East Penn Street, Butler."

"I am a consistent reader of your successful Pennsylvania Game News. The articles in your February issue on Woodcock and the Passenger Pigeon are most interesting.

"The last wild pigeon I shot was in the fall of 1874. For three days about 200 of them were feeding on acorns in some oak timber near Haddonfield, N. J. Your article refers to a Mr. Machamer seeing but two pigeons and shooting them in Steptember 1889, sixteen years after I saw them in New Jersey. Disease surely must also have been a large factor in their destruction."—E. T. Gill, Haddon Farms, Haddonfield, N. J.

Stray, and in some cases even licensed, dogs are causing no end of trouble in many parts of the State, Game Protectors and dog law enforcement officers report. These men are kept running day and night in an effort to curb this added menace to wildlife. Many deer have been killed by these dogs, which are of the half wild, police type species, and once they make a kill their lust apparently knows no bounds. Weakened deer handicapped by deep snow have no chance against these cunning animals and both the Commission and the Bureau of Animal Industry will welcome any reports of their depredations. Their marauding and ruthless killing must stop, both departments emphatically announced.

One hundred and eighty-seven different species of bird-life were observed during the year 1939 in York County by the Rev. Jay H. Arnold. They were all seen within the county or on the Susquehanna River bordering York County on the east.

CURRENT TOPICS

BLIGHT-FREE CHESTNUT TREES

Seventeen acres of young chestnut trees that will bear in the fall of this year are offered as proof by a Luzerne county man that the blight which destroyed these trees 21 years ago in Pennsylvania can be conquered.

The chestnut farmer is Postmaster George Holmes of Huntingdon Mills, who started experimenting years ago with nuts from a giant tree in the Lancaster section that withstood the blight when it first swept the state.

The first seedlings which Holmes raised were planted about his home and are now 22 feet in height and bear a big crop of nuts each year.

When he saw that these trees were a success he went in for the raising of trees on a larger scale. He purchased more of the nuts and planted them in boxes of sand in his store. The sand was kept moist and the nuts sprouted and grew into seedlings and then were transferred to the chestnut orchard until 17 acres of them had been planted.

Now the trees in this orchard are six feet in height and will bear this fall.

But Holmes hasn't stopped with the 17 acres. This winter he planted more chestnuts and now has about 7000 young chestnut trees in his store which he intends to set out in May on a 10-acre plot. They are being transplanted to other boxes in which each tree has four inches of surface space with the ground five inches deep.

Holmes figures that squirrels, attracted to the orchard, will tend to plant a steadily widening ring of chestnut trees around the orchard while burying the nuts and within a few years the chestnut will have staged a comeback in Luzerne County.

The experiment should prove interesting to game clubs of Schuylkill County who are keenly interested at the present time in similar projects to create more food for game.

Holmes isn't the only one who is making a success of blightfree chestnuts. There are a number of commercial nurseries including one near Philadelphia, where they may be purchased. A few dollars invested by each of the Schuylkill County game clubs in them would pay big dividends.—Jack Richards, Rod and Gun Editor, Pottsville Republican.

"Mr. Wm. Wolford, Hallton, Pa., whose duties carry him over the mountains checking wells and pipe lines for the Ridgway Natural Gas Company, relates an interesting story in the form of his contact with a group of deer which make their home on Game Lands #28.

"When the snow is too deep to permit his trips by truck he uses a tractor to make his rounds over the mountain and never fails to carry an appropriate amount of food to old "Molly" and her herd. If several toots of the horn on the car fail to bring his erstwhile friends he needs only to pound an old bucket on a rock where she is fed, and in a very short time the herd, guided by old Molly, are around the table.

"He has observed, in feeding Molly since 1928, that she has produced eight sets of twins and four single deer in this time. The majority of her family are still with her."—Game Protector Earl E. Smith, Elk County.

Several hundred pounds of food were dropped to starving wildlife last winter as John G. Mock, All-Outdoors Editor of the Pittsburgh Press, and representatives of the Pennsylvania Game Commission flew over snow-locked forests in three counties in a giant PCA-Boeing transport plane.

The expedition sponsored jointly by The Press, the Game Commission and PCA touched parts of Fayette, Somerset and Westmoreland Counties. Members of the party are shown above looking over a map of the territory before taking off. Left to right they are: Ralph L. Liphart, Allegheny County game protector; Rollin Heffelfinger, field division supervisor; John G. Mock, Pittsburgh Press All-Outdoors Editor; W. C. Ryder, game technician, Division G; Capt. W. C. Wieblen, chief pilot of PCA's Western Division, and Capt. J. H. Carmichaels, operations manager of PCA, who piloted the expedition's ship.

When you leave the water running through an outside spigot on a real cold day—here's what you get. It happened at a CCC Camp near Ridgway.

National Forests in the United States now aggregate 175,843,405 acres. This includes 41,000,000 acres of grass, browse and alpine country. A large part it is intermingled with more than 134 million acres primarily forest growth.

CLARKSVILLE BEAGLE TRIAL

The Spring Derby field trial for beagles was held by the Clarksville Beagle Club at Clarksville, Pa., on Saturday, March 9, with a field of sixteen derbies facing the judges for consideration.
witnessed by the gallery. The judges were Isaac Brown, Clarksville, and A. Lloyd Rossell, Canonsburg.

Following are the results:

13 Inch Derby Stake—First, "Rosscraft Sheik's Lady", owned by J. L. Ross, Clarksville; second, "Dowler's Brown Betty", owned by R. Audley Dowler, Midway; third, "Clark's Red Sail", owned by John Clark, Coraopolis; fourth, "Kennel's Blazer", owned by Harry Kennel, Canonsburg; reserve, "Wade's Rock", owned by Harry Wade, Clarksville.

15 Inch Derby Stake—First, "Whiskey Run Bartender", owned by James Hughes, Carnegie; second, "Whiskey Run Fizz", owned by James Hughes, Carnegie; third, "Boyce Rowdy", owned by Wm. Boyce, Carnegie; fourth, "Bennett's Sandy", owned by F. H. Bennett, Washington, Pa.; reserve, "George's Sky Rocket", owned by Oliver George, Bridgeville.

"A trapper of Cowansville trapped and dug out 140 skunks within a radius of ten miles. In 35 holes he found twelve dead rabbits, freshly killed, and partly eaten."—Game Protector A. H. McKissick, Kittanning, Pa.

The Venango County Rod and Gun Club, Franklin, Pa., plans to hold its Field Day activities on Saturday, September 7

ANTHRACITE TRIAL

The Anthracite Field Trial Association, Orwigsburg, held its annual spring trials on the club's grounds near Elysburg, Pa., March 16 and 17. Although the weather conditions were all but favorable, some 300 sportsmen and sportswomen were on hand to participate in the various classes of the trials. Winners are as follows:

Puppy—First, Knollwood Danny Dever; second, Allegheny Sam; third, Ichaways Village Bob.

Derby—First, Bradley's King-Tut; second, Bimpkins Boot-Jack; third, Belleview Nugym.

Open All Age—First, Delaware Frank H.; second, Dr. Jack Rose; third, Ott's Pat.

Members Amateur Shooting Dog—First, Lynoak Alex Kagen; second, Merry Mary; third, Millfarm Tick.

Best Schuylkill County Shooting Dog—First, Millfarm Tick; second, Gentleman Ginger's Bob.

The Booster Club of Everett, Pa., composed primarily of business men and sportsmen of that vicinity, hold a banquet annually for their farmer friends, each member of the club bringing a landowner guest if at all possible. At its annual meeting on March 26 over 220 were present, at least a third of which were neighboring landowners. An excellent discussion of the landowner's problems and his relation to town and city merchants was delivered by Professor Kenneth Hood, of the Agricultural Economics Extension of State College. These cooperative meetings are indeed wholesome and bring about a much beter understanding between the two groups.

The Keystone Setter & Pointer Club, 7th Annual Spring Trials, March 23rd & 24th, 1940. Winners Open All Age stake, left to right: Huray Bob, owner & handler, J. Howard Velott, Williamsport, 1st; Ben Nugym Mohawk, owner & handler, T. A. Hahn, Glassboro, N. J., 2nd; McBubb, owner Howard Velott, handler Charley Elder, Williamsport, 3rd.

GOOD EXAMPLE

Tarentum District Sportsmen's Club is to be commended upon the good sense its committee exercised in planning the annual banquet which was held in the country club the other night.

Instead of loading the program down with speakers, it limited the speeches to two. There were others present who were perfectly capable of making talks and worthwhile ones. But, their part in the event of the evening was restricted to a mere introduction.

How different this procedure from that which is usually followed by banquet committees which seem to have the idea their chief task is to crowd as many speakers into the program as possible. As a result the program drags out until the late hours and the crowd goes away completely exhausted, bewildered and resolving never to attend a banquet again.

It is to be hoped that the fine example of the sportsmen's banquet committee will not be lost on other groups assigned the duty of making such programs. The most successful banquet, as every banqueter will tell you, is the one that offers the fewest and the best speeches. Much talking, often by amateur speakers and tiresome ones, serve only to make banquets unpopular and to defeat their purpose.

The Meadville Chapter of the Crawford County Sportsmen's Council raised 95 out of 102 ringneck pheasants furnished by the Game Commission last season.

If you hear a loud "Bingo!" on the shooting range these days. you'll know it isn't the report of a gun, but a lot of big shots of the skeet shooters' world playing a little game they call "Bingo for a Bingo—and Take a Shot at a Pheasant."

Shooting over the Byberry traps of the Tri-County Skeet Club, Dr. Milo Roseman and Jack McKenna were fortunate enough to hit Bingo and thus blaze away at two pheasants apiece—which they downed.

Here's how it works. All the skeet shooters line up and put paper slips in a box. A number is drawn and the holder of the lucky number gets a pot shot at a pheasant released from a box. If he's lucky again he fells the pheasant and has meat for the next day.

Everybody is enjoying the new game, except the pheasants.

The 1940 National Archery Tournament will be held on the campus of the Massachusetts State College at Amherst, Mass., August 5 to 10, 1940.

KEYSTONE TRIALS

A very windy Saturday and Sunday, March 23 and 24, witnessed the running of the 8th annual Spring Trials of the Keystone Setter and Pointer Club of Reading. Despite the cold, stormy weather a large group of sportsmen and sportswomen enjoyed watching the brilliant work of some of the best dogs in the east.

Harold M. Watson, Cornwell Heights, Pa., and Arthur J. Brandt, Jersey Shore, Pa., were the judges for all events, and their decisions were loudly applauded.

The Open Spring Puppy stake which headed the events on Saturday morning found fourteen yearlings facing the starting whistle.

Black King of Spades, fast little setter male, owned by W. Bowie, Lutherville, Md., and handled by Austin Heckscher, Pemberton, N. J., won first place and a leg on the Kagen Cup, symbolic offering to our dogs of the future. Second, Chester Valley Jane, owned by J. Paul Brown, of Swarthmore, Pa. Third, Sue, setter female, owned and handled by E. G. King, Annvile, Pa.

Open Shooting Dog: Shy Ann B, female pointer owned by Mrs. Viola E. Warne, Frenchtown, N. J., and handled by Bud Schaffer, was acclaimed the winner.

A second series was necessary to place second and third place dogs but on its completion Hikers Briar's Thorn, great white and orange marked setter, owned and handled by Dr. Carl Williams, of Philadelphia, was justly placed second.

Third place was awarded Lynoak Alex Kagen, pointer male, owned and handled by W. J. Zimmerman, Shilington, Pa.

Open All-Aage: Huray Bob, great orange marked pointer owned and handled by Howard Velott, of Williamsport, was a stranger to our efild trials, was the winner. Ben Nugym Mohawk, setter male, owned and handled by T. A. Hahn, Glassboro, N. J., took second, and McBubb, liver and white pointer also owned by Howard Velott but handled by that well known sportsman, Charley Elder, of Williamsport, was placed third.

The Hellertown Sportsmen's Association, Northampton County, recently subscribed to Game News for five Boy Scout Troops within that district.

The Keystone Fish and Game Association, at a largely attended meeting in Shamokin Monday night, considered a request made to the county commissioners to assist in a project for sealing abandoned coal mines in the Clearfield County section to end pollution of the West Branch of the Susquehanna River, and adopted a resolution urging the county board to reopen the question and if possible make an appropriation toward the cost of the work.

According to a report of the Chief of the U. S. Forest Service for the year 1939, "States now own 19,000,000 acres of forest lands. Eleven million acres have been designated as State Forests or Parks. Ninety per cent of this area is in New York, Pennsylvania, Minnesota, Michigan, Montana, Idaho, Washington, New Mexico, Wisconsin and Massachusetts."

(News Photo and Engraving)

Honor guests and speakers at the 16th annual banquet of Tarentum District Sportsmen's Club, held recently in Brackenridge Heights Country Club, are shown as they grouped for this informal picture by The News staff photographer. Seated (left to right) are Fred McKean, of New Kensington, member of the state fish commission; Attorney Hale Hill, of Tarentum, who served as toastmaster; Sheriff John Heinz of Allegheny County; County Commissioner John S. Herron, also former mayor of Pitsburgh, and Jesse L. Humes, president of Tarentum Club. Standing—W. A. Miller, Emlenton, secretary Armstrong County Sportsmen's League and a county commissioner; John G. Mock, Pittsburgh Press outdoors editor; C. B. Phillis, president Allegheny County Sportsmen's League; Harris G. Breth, radio commentator and columnist for the Pittsburgh Sun-Telegraph, who was principal speaker, and Ray McKissick, Armstrong County Game Protector.

Times Staff Photo.

These officers and directors of the Berks County Chapter, Izaak Walton League of America, are engaged in leading members through one of their busiest years in history. Front row, left to right: John D. Rothermel, chairman of the board of directors; Clement Parlaman, vice president; John P. Beck, president; Harvey Adams, treasurer, and Alfred A. Ramm, Jr., secretary. Back row: Directors, Byron B. Mortimer, education; Levin D. Schearer, woods; Ralph E. Walley, program; Albert Green, waters; Oscar A. Becker, membership, and Harold C. Marbarger, wildlife.

Crack rifle team of the Oil City Chapter No. 61, I. W. L. A. Standing, from left to right: Riley, Griffiths, Mullins, Fye, R. Frank, McDowell, and rangemaster Keeley.

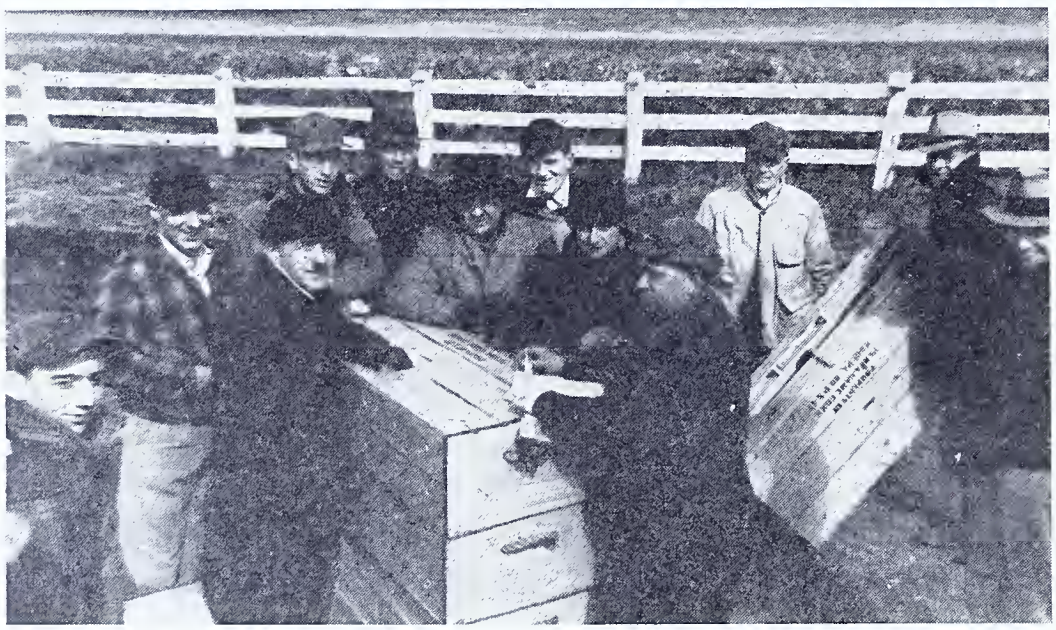


Photo by Ellen A. Dietrich

Ambrose Gerhart of Souderton, Montgomery County Game Protector, distributing pheasants to representatives from the Montgomery County clubs which are affiliated with the Federation of Sportsmen's Clubs in this County.

Over 200 enthusiastic men, women and children turned out for the annual meeting of the Mechanicsburg Sportsmen's Association, which was celebrated as a part of Wildlife Week on March 21. Splendid addresses on the potential value of the state and nation's natural resources were given by Dr. William R. Shearer, member of the House from Carlisle and Merrill C. Merritts, Vice-President of the State Federation of Sportsmen's Clubs. Field Division Supervisor Wm. J. Davis, and Game Protector Joseph Foreman, of the Game Commission, and George James of the Fish Commission, gave brief summations of the game and fish restocking programs of their respective departments. Numerous valuable door prizes were awarded, one of five fishing rods awarded being won by one Edward Fish of Mechanicsburg.

At its annual meeting on March 25 the Crawford County Branch of the Sportsmen's Council agreed to take in 200 members of the Titusville-Colestock High School Sportsmen's club as junior members. Over 350 enthusiastic members attended and heard addresses by Fred F. Whipple, of Meadville; Hon. Robert Lamberton, member of the Game Commission; Hayes T. Englert, Field Division Supervisor, of the Commission; Game Protectors George Keppler, of Meadville and John Kennedy, of Erie; W. H. Coffin, of Waterford; and County Fish Warden Gerald F. Munson, of Linesville. Richard S. Strouss, veteran sportsman from Saegertown, was elected President of the Council for the second time, being the first man in the history of the Crawford County Branch to receive that honor.

VALLEY FORGE TRIALS

"The Valley Forge English Springer Spaniel Club held its Fifth annual Prospect Stakes at the Pheasant Run Game Farm, Fort Washington, Pa., Saturday, March 23. The weather, unseasonably cold and very high winds, made work very difficult for the dogs, but there was some excellent work during the day and the winners deserve great credit. There were 32 entries including 10 Cocker Puppies, 14 Springer Puppies, and 8 Novice Springers. Only 2 dogs, both Cockers, were scratched. The winners were:

Cocker Puppy Stake—First, Jolly Boy of Jumping Brook, Jumping Brook Kennels; second, Erse Charm, Mr. F. B. Reeves, Jr.; third, Athadele's Tar, Mrs. Malon K. Jordon; and fourth, Gay Yorick, Mr. Harry Cameron.

Springer Puppy Stake—First, Riverton Sir Wilbert, Mr. and Mrs. W. E. Belleville; second, Hollybrook Gay, Mr. Harry Caesar; third, Fizz of Falcon Hill, Mr. Henry L. Ferguson; and fourth, Strawberry Hill Katrinka, Mr. and Mrs. Fraser M. Horn.

Springer Novice Stake—First, Hollybrook Brook, Mr. Harry Caesar; second, Clarion Ryta, Mr. R. E. Allen; third, Daily Sport, Mr. W. P. Conway; and fourth, Eldgyth Rebel, Mr. John M. Freeman.

"For the benefit of those who have never seen a Springer Spaniel work his job is to do just what his name implies, ie., spring the game, either fur or feathers. He should work to the gun at all times, staying within about 30 yards, and he should be a perfect retriever, (most of them are natural retrievers). He must at the same time be a bold courageous dog, taking the heaviest cover without hesitation and quartering his ground at a good rate of speed.

"A good illustration of the value of the Springer from my own experience occurred last fall. On the opening day three of us had hunted most of the morning without result when we finally succeeded in knocking down a Cock that promptly took to its heels in heavy cover. My Springer finally ran him down and caught him. Later in the day he ran down and caught two cripples which were hiding in heavy cover which had been passed up by longer legged faster moving dogs. So far as pheasants were concerned I did not need a gun that day."—Clement Tingley, Secretary.

The recently organized Timber Ridge Sportsmen's Association in Fulton County held an enthusiastic meeting at McConnellsburg on March 21, at which approximately 100 were present.

The speakers included Hon. William G. Fluke, member of the Game Commission from that part of the State, and James N. Morton, Chief of the Commission's Division of Game Land Management. The Commission's moving pictures were shown by John B. Sedam, from the office in Division D.

The new organization is affiliated with the Federation and is under the leadership of very active and interested sportsmen in Fulton County. Sportsmen in other parts of the State will be interested in this meeting, as it will be recalled that Fulton County was one of the two counties which did not have a delegate at the Federation meeting in Harrisburg, on February 12, 1940.

RIFLE TEAMS ACTIVE

Four rifle teams of the Lower Merion Rod and Gun Club have just completed a series of inter-club rifle matches held during the past twelve weeks in the Club's Indoor Range in Narberth. The winning team members, arranged alphabetically and not in order of scores, are as follows: Joseph Boyle of Drexel Hill, Lloyd Colvin of Narberth, Ellen Dietrich of Philadelphia, Henry Hopkins of Narberth, A. S. Hutton of Narberth, H. K. Merkle of Drexel Hill. Fred Plumridge of Larchmont and Ross S. Williams of Roxborough. Henry Hopkins was captain of the winning team.

The five highest average scores, irrespective of team, during the twelve weeks were made by the following: first, Fred Plumbridge of Larchmont; second, G. Sherman Williams of Roxborough; third, Lloyd DuBois of Merion; fourth, Walter Miesen of Narberth; and, fifth, Henry Hopkins of Narberth.

On Saturday, June 15, this club will hold its Annual Spring Outing and Picnic on the Ridgeway Farm at Bethayres. Among the events which the Picnic Committee has arranged are: pistol and rifle matches, trap shooting, water boiling contests, surf, fly and bait casting and games of quoit. Prizes will be awarded in the various events. The basis on which these prizes are to be awarded has not yet been determined. Last year, however, they were awarded on a basis similar to the "Lewis-Class" system, whereby less expert contestants received prizes as well as the more skilled. This method of awarding prizes created much favorable comment and good feeling and may be repeated in the outing and picnic which this club is now planning.—Ellen A. Dietrich, Secretary.

The Somerset Sportsmen's Association recently released one hundred ringneck pheasants in Somerset County, which they raised from six-weeks old birds. The Meyersdale Sportsmen's Association, in the same county unit, has begun construction on a fifty bird size pen, to follow the leadership of their neighboring association. Enthusiastic sportsmen in Meyersdale and immediate vicinity have just recently formed their organization, but they're quickly establishing themselves as a live-wire club.

Somerset County is noted for many things —fine quality maple syrup, potatoes and of course, Mt. Davis, the highest point in the State. But Somerset sportsmen won't be satisfied until they've made their unit of the Federation the most active one in the State.

"The Frosty Sons of Thunder", as Whittier so chose to call them, are now planning a county-wide banquet to be held at Meyersdale, May 2, 1940. A varied program of entertainment is being arranged and speakers are being contacted to make this first Somerset County Sportsmen's banquet a memorable one. Roast turkey, prepared in the manner that those Meyersdale women know how, awaits all sportsmen and their friends who care to attend.

The mountain goat isn't a goat at all—it's an antelope. As is the case with several species of animals, the mountain goat was misnamed because of his appearance.

Photo by Charles H. Wentzel

Elmer Lenker, Jr., Paxions, Pa., standing behind dog which killed 4 half wild house cats. The dog was badly mauled in the melee. Mr. Lenker said the cats were regular night marauders, coming to his farm every evening.

Berks County, Pennsylvania, is proud of its chapter of the Izaak Walton League which is the fourth largest in the United States. Their success has been largely due to the balanced program offered to members interested in various phases of conservation work. Each director of the chapter has a definite job to do and is chosen for his ability to perform any work assigned to him, and is not in any sense a figure head in the chapter. Berks Waltonians recommend this form of organization to other sportsmen's clubs as the best method of accomplishing results. Highlights of the year's activities are: The wildlife director has supervision of committees which have charge of game stocking and propagation. In the past year they raised and released at maturity 96 out of 100 six-weeks old pheasant chicks given them by the Game Commission. Winter feeding activities were carried on and efforts constantly carried out to improve farmer-hunter relations and game conditions in the territory assigned to them.

The Director in charge of Waters worked with committees which obtained from the city of Reading the use of one of its reservoirs as a fish rearing pond. Stream improvement projects were carried out to completion. A juvenile fish pond was supervised throughout the summer months. An indoor casting contest was staged in the early spring.

The Woods Committee, under their director, obtained a plot of ground on the county jail property and successfully carried out a game food tree nursery project. These trees were distributed to farmers who provided open hunting on their farms.

Several safe fireplaces were constructed in the Blue Mountains for the use of the general public.

The Education Committee arranged an essay contest in the local high school, provided speakers for a quarter hour radio broadcast once a week for several months, and furnished speakers for the civic clubs during wildlife week. A monthly bulletin was mailed to all members. The Program Director, in addition to providing the speakers and entertainment at every business meeting, also supervised the most successful field day ever conducted by the Waltonians.

The Membership Director kept up a twelve months campaign for new members and renewals.

The chapter held business meetings every month during the year, meeting in the Fall, Winter and Spring indoors and in the Summer outdoors at the Palisades Country Club. Board of Directors meetings were also held once a month all year around and the various active committees met as often as necessary to take care of the many projects which were started and completed. The directors' jobs were to organize these committees, supervise their activities and report the work accomplished to both the Board of Directors and the chapter business meetings. There was work during the entire year to provide the workers among the members with an outlet for their enthusiasm in the practical forms of conservation activities. Annual reports are submitted in writing by all directors summing up the years work and they act as a guide to their successors.

The Berks Waltonians are convinced that this method of organization will build up any sportsmen's group and enable them to be most successful in carrying out conservation projects.—W. F. Goddard, 1012 Washington Street, Reading.

During February 147 game prosecutions were brought, and $7,151.50 in penalties was collected.

Photo Courtesy of Allentown Call-Chronicle

Over 2000 persons attended the three day sportsmen's show held by the Lehigh County Sportsmen's Federation March 28 to 30 inclusive, which consisted of exhibits of the Fish and Game Commissions, individual displays, including sports photos of the Call-Chronicle and others. There were also many special attractions such as a wood chopping demonstration by Chester Francisco, of Wind Gap, and Bob Werner and Bill Windrick, of Fern Ridge, champion team cutters. A reforestation project of the Federations, which calls for the planting of 10,000 trees was depicted in the Girl Scout Exhibit, and the U. S. Soil Conservation exhibit also sponsored a fine educational display. Entertainment included a splendid vaudeville performance and Game Commission motion pictures.

The Committee in charge included: Franklin C. Jones, chairman; Harry Paff, Robert D. Dreisbach, Earl Cope; Henry Klausfelter; Charles H. Nehf; Ernest Kistler, and Forrest B. Kiefer.

One hundred and forty-six sportsmen from Huntingdon and nearby counties attended the annual banquet and entertainment held by the Petersburg Game, Fish and Forestry Association in the Methodist church, at Petersburg, Friday evening. Officials of the Game, Fish and Forestry Departments delivered brief addresses. The meeting was conducted by the Rev. Charles Stong, pastor of the Zion Lutheran church, of Petersburg, who also acted as toastmaster.

Prizes were awarded to Fred Miller, first prize for the largest trout; second prize, Horace Manbeck, for the largest brook trout; third prize, Ira Metzgar for the largest black bass. Each received a Shakespeare fly rod. Johnny Cutshall won a telescope rod and reel for killing the most snakes in the boys' contest.

Winners in the vermin contest included Paul Lightner, B. G. Medling, Guy McManus, Clayton Simmers, M. L. Kirkpatrick, Wilfred Fleck, Boyd Steel, Carl McManus, Blair Hurley, Clair Brooks, J. E. Benton, R. L. Anderon, R. G. Lightner, H. F. Manbeck.

Sportsmen and biologists are agreed that destruction of natural habitat is largely responsible for the disappearance of the lesser prairie chicken from most of its former range and that if the disturbance continues at its present rate the species will probably disappear. In an effort to counteract this situation the New Mexico Department of Game and Fish has proposed the acquisition of two areas in Roosevelt County as upland game bird refuges.

TRI-STATE SPORTSMEN'S SHOW

"Over 3,000 people attended the three-day sportsmen's show sponsored by the Tri-States Rod and Gun Club and the Matamoras Rod and Gun Club recently. Pop Singer, local woodsman, put on a chopping act; there was a contest of old fashioned fiddlers; Mr. Raymond Oswald and son Edgar of Nazareth gave a wonderful exhibition of archery; there were log sawing contests between New York and Pennsylvania teams; skating exhibitions; love fox chases set in a woodland background; a wild animal display in which a young otter stole the show, etc.

"A pie eating contest for the kids went over big, as did the Junior Hill Billy bands. Good music was furnished in the evenings by Phil Judd's orchestra from Milford and other local bands. Moving pictures relative to hunting and fishing went over big and the Game Commission's colored pictures drew large audiences and requests for information relative to our method of operation and game supply.

"Over the loud speaker system Mr. Welch, Conservation Officer of Orange County District, New York, made a plea for better law observance and the necessity of keeping dogs out of the forest. He also gave the New York State residents a picture of what the wildlife had to contend with during this hard winter. I gave a talk relative to our own difficulties and the need for game feeding, restraint of dogs, law observance, with a few remarks on deer conditions in regard to the range, and other interesting topics about conservation. Altogether it was a fine three-day program."—Game Protector John H. Lohmann, Pike County.

BEAGLE TRIALS

Beagles did their stuff at the spring trial of the Stein's Hollow Beagle Club, St. Clair, on March 19. Winners in the event (13 Inch Class) included: First, Vinecliff Rapid Dan, Dr. W. R. Dykens owner and O. E. Johnson handler; second, Molly Ann, Dr. J. M. Della Croce owner and handler; third, Dietrich's Sheik, Roy Dietrich owner and handler; fourth, Freelyn Fretan, Dr. J. M. Della Croce owner and handler; reserve Bluecapatch Blue, Myron Moyer, owner and handler.

Some 3,000 employees and cooperators of the Bureau of Biological Survey are now estimating the number of wild ducks, geese, and swans throughout the United States and Alaska. Under the leadership of 10 regional directors the corps of observers making the sixth annual waterfowl inventory are using blimps, airplanes, autogiros, boats, automobiles, and snowshoes to get to the waterfowl concentration areas. Last year survey experts estimated that there were between 55 and 60 million migratory waterfowl on the continent.

The U. S. Forest Service urges growing more and better forests to provide employment, increase mass production power, balance the drain from usable forests with new growth in them, and make an investment in security for the Nation and its people whether or not markets for more forest products are in sight.

Armstrong County Hunting and Fishing Club directors recently laid the foundations for a year-round program of greater interest to the general public. With the joint purpose of providing a better organized program of activity for county sportsmen and raising funds for the erection of a combination clubhouse and community center the directors:

1. Appointed committees to arrange the first of a series of entertainments for which radio artists will probably be engaged.

2. Planned to control predatory animals and to hold crow and vermin hunts.

3. Considered arranging an inter-county skeet tournament that would match local skeet enthusiasts with sharpshooters from other western Pennsylvania towns.

4. Made preparations to transfer rifle competitions outdoors, upon completion of the indoor rifle season.

All current activities of the club are concerned with turning the Pony Farm property, in North Buffalo Township, into a community center. The club hopes to construct a new clubhouse, landscape the surrounding area, and create an outdoor swimming pool where a qualified attendant would be on hand to protect the youngsters.

Gunnery interest is being maintained through participation in the Allegheny Valley Rifle League's indoor program, skeet plans for the shotgun enthusiasts, and range competition for the pistol marksmen. The Club's entry in the Rifle League was undefeated champion of the circuit last year, and is well on the way to another title match.

Over sixty members of the Montgomery County Federation of Sportsmen's Clubs met at the Eastern State Penitentiary, Graterford, on Saturday, March 9, to help Game Protector Ambrose Gerhart, of Souderton, distribute 648 pheasants. Of the birds liberated, 113 had been trapped by Game Protector Gerhart from various game refuges; while 535 of the birds had been furnished, when tiny "chicks", by the Pennsylvania Game Commission and had been raised to maturity by inmates of the Eastern State Penitentiary under the guidance of Ira J. Mills, Director of Agricultural Education at the prison.

That northwestern corner of Lancaster county, long neglected as a district in which to have a sportsmen's club, added its name to the list of such organizations in the state, when on Wednesday, March 20, the "Conewago Rod and Gun Club" was formed at the Kennewood Hotel in Elizabethtown. David Groy, fish culturist of the Hershey Estates, led the oranization work and did a very fine job. This district includes the towns of Elizabethtown, Bainbridge, Maytown, Rheems, Newville, Milton Grove, and Mastersonville, and represents a total of fifteen hundred hunting and fishing licenses.

One hundred and twelve sportsmen attended this meeting and greatly enjoyed the inspirational talk given by "Mike" Seaman, editor of the sportsmen's column in the Harrisburg Telegraph and a motion picture supplied by the State Fish and Game Commission. C. Allen Wiker, President of the Lancaster county Federation of Sportsmen's Clubs, was also present and gave many timely and valuable suggestions on how to start a club in the right way.

David Groy was chairman of the meeting for the evening and the following temporary officers were appointed to function until the regular election on April 3, at the Kennewood Hotel: Harry G. Hershey, secretary; Nominating committee, Walter Longenecker, chairman, and Irvin Baylor, Dr. L. W. Fetter, Albert Boltz, Harvey Olweiler, Charles R. Boggs, Walter Frey; Membership committee, Ellwood Boyer, Chairman, and Milton Heilman, W. G. Mumma, George Doyle, Paul Fisher, Joe Henderson; Publicity committee, Robert H. Boggs, chairman, and Harry Hershey, G. W. Westafer, Carl Breneman; Constitution and By-Laws committee, Louis Ulrich, chairman, and Ellwood Grimm, Dr. L. W. Fetter, D. Latchem Reem, Chester Engle, Lester Weidman.

Over 300 ardent sportsmen attended the Fourth Annual Banquet of the Columbia Rod and Gun Club in Bloomsburg on March 1. Speakers of the evening included Seth Gordon, Executive Director of the Game Commission; John B. Ross, Field Division Supervisor, Williamsport; Dalton Bell, Chairman of the Central Division of the Federation of Sportsmen's Clubs, also of Williamsport; and Prof. George Keller, of the Bloomsburg State Teachers' College. Professor Keller provided an outstanding feature of the program by bringing a mountain lion with him. Over 52 door prizes were presented by local merchants and special prizes were awarded for the largest catch of trout and bass.

Bethlehem Archery Club, of Bethlehem, Pa., cleaned up in the first annual indoor Minsi Conference tourney at Menlo Park, Perkasie recently, winning by a score of 2,801 points. Their nearest competitor was Nazareth Archery Club, which had 2,669 points.

Other clubs finished as follows: Lenni Lenape Club, Sellersville-Perkasie, 2,589; Loxley Bowmen, Lansdale, 2,272; Easton Archery Club No. 1, 2,209; Bethlehem Archers No. 2, 2,018; West Point No. 1, 1,818; Easton No. 2, 1,679; West Point No. 2, 1,341.

Curt Pearson, of Bethlehem, won first prize in the men's division and Mrs. F. D. Heyder, Perkasie, won the ladies' individual prize.

In Birmingham, Alabama, the H. G. Hastings Seed Company generously offered to give free four-pound packages of wild bird seed to any person who distributed it to birds. Soon after the announcement in a newspaper, over 1,000 people had lined up to receive the free seed, and five store employes were kept busy wrapping the seed. When the original supply of 1,000 pounds was exhausted, Manager Henry Terry obtained more and gave it away. Up until 3:00 P. M. of that day, the company gave away two and a quarter tons of seed.—4,500 pounds!

A BIRD OF A STORY

Frank Perry and Rocky Patierno fired into a covey of quail, but missed.

The birds rose with a great flutter and flew straight into a billboard. The hunters picked up ten and went home.

"This is awful.....and the Skeet Shoot starts in 15 minutes!"

Cottontail Nesting Study in Pennsylvania

(Continued from Page 11)

court—was trampled, and the three nestlings were killed.

In addition to the nests under observation, two examples of nesting mortality were reported. P. E. Randall found a nest in which three of the four young were dead from open wounds on their sides and flanks. The fourth nestling was untouched and alive in the bottom of the nest. Mice or shrews appeared to have been the predators. O. R. Snyder, of Allentown, Pennsylvania, watched a large weasel *(Mustela* sp.) carry young rabbits, one by one, from a nest into a den between two rocks.

An Indicator of the Success or Failure of Old Nests.

Of the 25 active nests under observation, 16, or 64 percent, were successful. To determine the success or failure of the numerous old nests presented a more complex problem. After the small pellets of the young had been found at several old nests, they were believed to indicate successful nests. An investigation revealed that pellets were always present at known successful nests, but no pellets were ever found at a nest known to have been destroyed. Nestling cottontails do not drop pellets until they have fed upon solid foods. Several days prior to their final departure, the young venture short distances from the nest to feed, and after this the first pellets are dropped. The nesting materials and the peripheries of the nest must be searched thoroughly if pellets are to be found, and one or two pellets are enough to indicate the success of a nest. Twenty-two of the 34 old nests examined contained pellets of the young cottontails: this indicated the success of 64.7 percent.

Summary

1. Twenty-five active nests and 66 old nests were found by systematic search from April 1, 1939, to September 15, 1939. Eighty-six nesting cavities that were never completed as nests were also found by this method.

2. Nests were located in a variety of habitats, but the majority were found in wastelands, alfalfa, orchards, and hayfields.

3. The peak of nesting activities was recorded late in May and early in June, and progressively fewer nests were found throughout the remainder of the nesting season.

4. Twenty-six litter counts ranged from 3 to 8 young and averaged 5.42 in a litter. Larger litters were found early in the season.

5. One female, known to be in her first breeding season had only one litter for the year.

6. Ordinarily the female rabbit returned to the nest only to feed the nestlings. A timing apparatus recorded one feeding period about dusk and indicated a second feeding period about dawn. Young rabbits could call the female in time of danger by squealing.

7. Skunks, the larvae of the flesh-fly *(Wohlfahrtia vigil)*, and man destroyed 9 of the 25 active nests under observation. Reliable cooperators noted the destruction of one nest by a weasel and of another by shrews or mice.

8. The presence of the pellets of the young in or about the peripheries of a nest seemed to indicate success for that nest. Twenty-two of the 34 old nests examined contained pellets and indicated the success of 64.7 percent, as compared with the known success of 64 per cent of 25 active nests.

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Persons who disregard the lives of wild things usually have little love for their fellowmen.

A GROUSE SHOOTING MOVIE » » ALMOST!

(Continued from Page 12)

had just half as much sense as the dog and would just follow him, we might at least get some shooting. It seems that Bob went up the ridge into a laurel bed and froze. Doc's wife had blown her whistle and yelled for us but as we were talking and the wind was wrong we did not hear anything. So at last she walked in and out went a nice pair of grouse.

The balance of the day we all hunted together, needless to say. We had not gone far until Bob came on to point, but the bird flushed before we could get close enough for a shot. Bob then moved on about twenty yards and froze again. This time the bird laid until Doc just about stepped on it, and of course when it went out he mowed it down, putting the whole load into it at about twelve yards. Feathers flew in all directions. This ended Doc's shooting for the day as he had the limit of two birds, although his wife and I each were entitled to another bird.

We had just about an hour of hunting time left and I was getting anxious to score again, as I knew if I went home with one bird while Doc had his limit he would do an awful lot of talking around the drug store as to just how good he was and how good I wasn't.

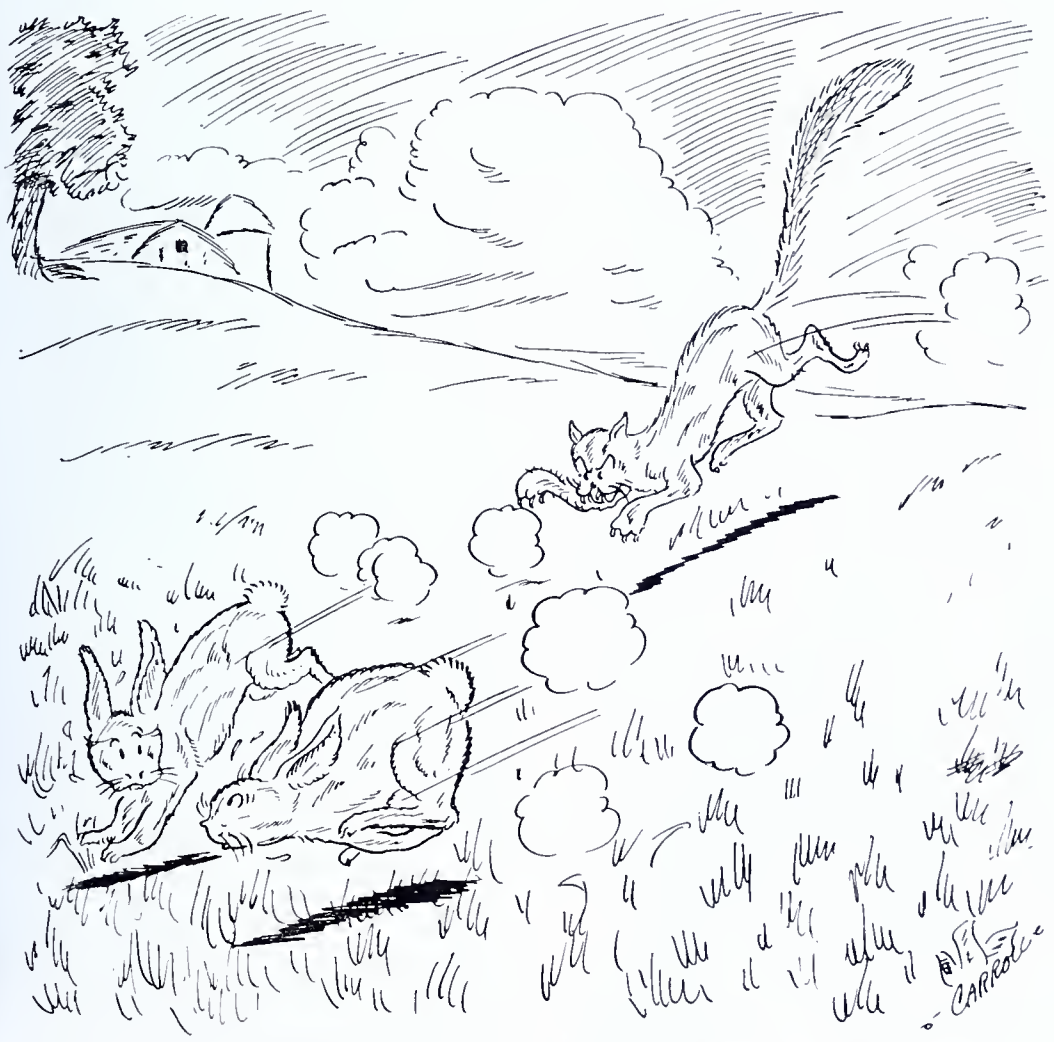
Bob pointed a bird along an old tram road. I walked in and wham, wham, away it sailed, and while I stood there with an empty gun, listening to a short lecture on how to kill birds from Doc, out went two more birds from under the same bush, and then I was really beginning to burn up, when Doc's wife called that Bob was on point on out ahead of me in back of some pines. I did not lose any time getting there as it was just about quitting time. Then, as the bird flushed a little wild, I cut loose and broke a wing. Bob went out and caught and retrieved the bird. I was then pretty darn happy and did not mind when Doc announced that it was just about two minutes until five, which is quitting time here in the state of Pennsylvania.

We all marched single file down an old path to the car, where we ate some more of Doc's candy bars, loaded up in the old flivver and headed home.

About two weeks after season closed I stopped in the drug store and Doc informed me that he had just received the film back from being developed and I was to go along upstairs and he would put it on the screen.

It sure was a good thing that his wife was not at home or any other ladies present, as Doc's language was not of the very highest type, when he saw that the film showed about twenty feet of clear sky, fifty feet of tree tops, fifteen feet of laurel, and the balance of the film showed Doc's feet and pant's leg.

Doc announced that from now on when we go hunting we will go hunting and that if his wife wants to get any pictures she will have plenty of time to get them during training season.



If I'm not running away from autos and foxes it's stray cats.....it's giving me 'athlete's foot'."

Harrisburg Telegraph, Mar. 20, 1940.—Dr. Sam Williams, Pitt Biology chief, who frequently breaks into this column because he's such a helluva fine fellow, has gone poetic on us in the March issue of the Pennsylvania School Journal. I am indebted to Pat Moriarity for bringing it to my attention. Here 'tis.

WHITHER?

By Nobe Frank

When we analyze our education, the education of today,
We are prone to ask the question, "Does the system really pay?"
Just to teach a boy to read and write, to multiply-divide
And neglect to bare the secrets of the big, wide world outside.
The world of birds and trees and flowers, of bees and rippling brooks;
These teach a great philosophy that can't be found in books.

These teach him to be humble, considerate and kind;
They establish a connection with things that are Divine.
They give a better concept of Faith, Hope, and Charity
Of "Love thy neighbor," "Peace on Earth," truth and fidelity.
They make the boundary of his vision the outline of a star;
They lift his eyes from mud to skies and reveal things as they are.

Perhaps this education, the education of today,
Has dollar signs instead of stars to guide along the way.
We need a few more humans with the wisdom of a Sage,
Who understands the problems that confront boys of this age.
We need a lot of people who know what beauty means,
To help boys chart their course along life's tortuous stream.

Time was when teacher had the time to counsel and advise,
To serve as friend and confidant and to philosophize.
To talk about the birds and flowers, the mountains, and the sky;
To show Youth living poetry and kingdoms ever nigh.
But now she's so preoccupied with reports and various books;
She hasn't time to think about the trees and bubbling brooks.

Emphasis is now on buildings and upon achievement tests;
"Norms," "Percentiles," "Factual data" are terms which may suggest
Just how our education, the education of today,
Has cast aside the patterns of the good old-fashioned way.
The boy is just an integer in a progressive scheme
Of education that's become a mechanized routine.

Yes, perhaps, our education, the education of today,
Has lost some of the goodness that was present yesterday.

—SAMUEL H. WILLIAMS,
University of Pittsburgh.

WORMING FOR HOOKWORM

« « By W. Newbold Ely, Jr., M. F. H.

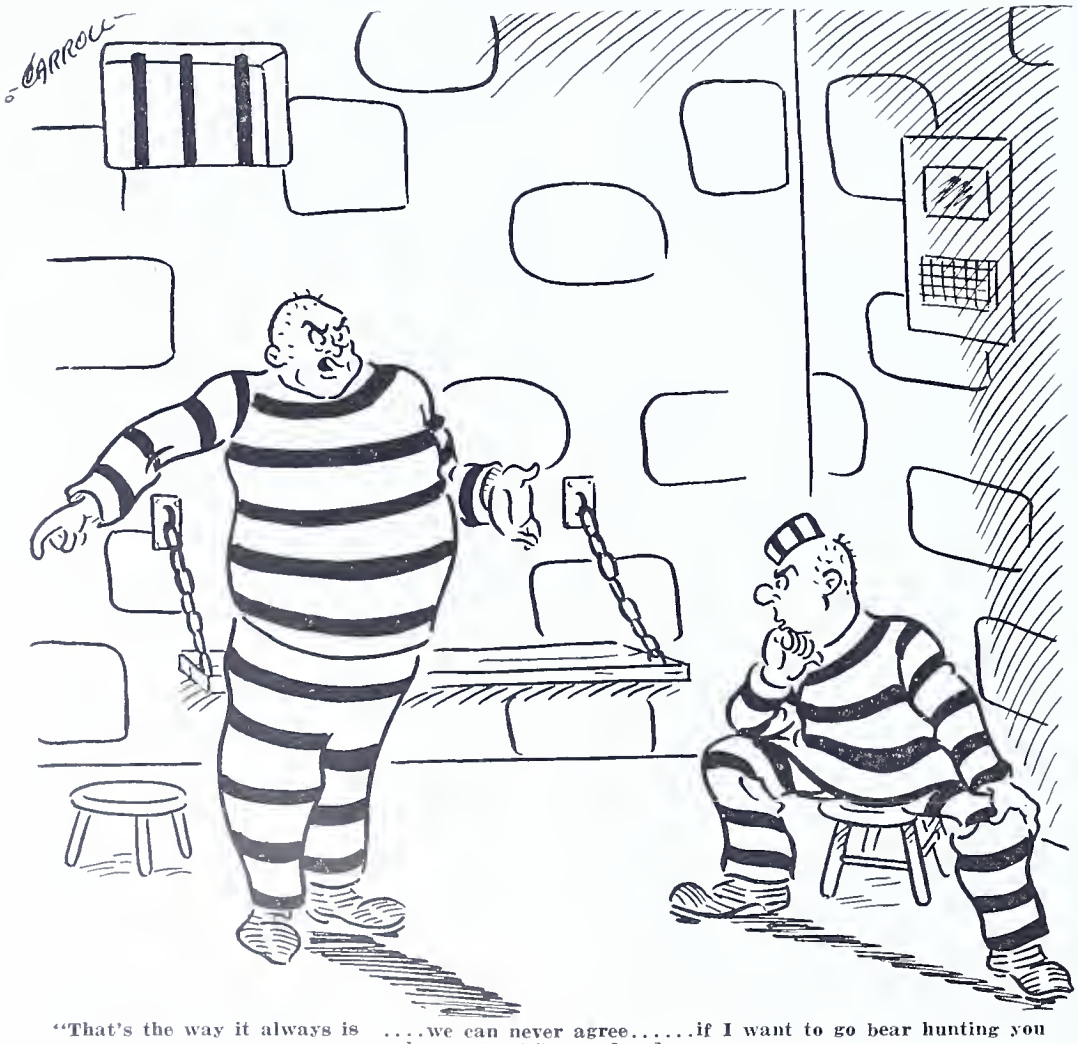
INASMUCH as the veterinary profession has noticed more than the usual amount of liver trouble in hounds lately, at least from the statistics which we have at the Veterinary Hospital at the University of Pennsylvania where I have the honor of being on the Board of Managers, I thought it might be well to give the approved method of worming for hookworm as recommended by Dr. William J. Lentz of that institution who, as most readers know, ranks as one of the most outstanding dog veterinarians both in this country and in Europe. Incidentally he was the first one to use carbon tetrachloride which was subsequently developed by the Bureau of Animal Industry as carbon tetrachlorethylene, the latter derivative being slightly less toxic. Dr. Lentz recommends using carbon tetrachlorethylene straight, i. e. without any other preparation being added, and only that chemically pure produced by a pharmaceutical house of unquestioned reputation; also the dose should never be more than that indicated on the box.

Many of the liver troubles in hounds are caused by the absorption of tetrachlorethylene. The trouble can be also caused by too frequent worming, overdose, or improper diet and feeding both before and after. We have covered the matter of dose, and as far as frequency goes, it should not exceed four times a year.

The last subject, that of diet and the feeding before and after worming is, we believe, probably the least appreciated by both hound owners and even many of the veterinary profession. In the first place carbon tetrachloride and carbon tetrachlorethylene are violent calcium depressors. To counteract this effect skim milk should be fed for four days previous to the worming, one quart to each fifty pound hound. Then the hound should be starved for twenty-four hours and given a saturated solution of Epsom salts on the basis of two tablespoons for each fifty pound hound. Eight to ten hours later they are given the capsule of carbon tetrachlorthylene as described previously. Then three to four hours later skim milk on the basis of one quart per fifty pound hound, and two more feedings of milk on the same scale during the next twenty-four hours. After that they can have regular feedings except they should have no fat for several days. In fact the reason skim milk is specified in each of the above cases is because it does not contain fat. Fat in either the milk or food increases the absorption of carbon tetrachlorethylene which is what we are trying to avoid. We feel that this diet feature can not be too strongly emphasized as we know of many cases where hounds were considerably hurt by the absorption, and often the ill effects may not show up for some time, and only in post mortems can conditions of the liver be shown. Too many kennels have a way of giving worm capsules the way some people would take aspirin tablets. The drug, carbon tetrachlorethylene, was so highly poisonous that it was many years before scientists dared to even try it. Yet such a drug has to be used because it is a case of fighting fire with fire when you come to hookworm which can even frisk around in hydrochloric acid on account of its armored shell.

There is another disease which has been rather active of late known as Weil's Disease which bears the simple scientific name of Spirochoetosis Icterohaemorrhagica, and hounds should be tested for this if any liver up-set condition is suspected. A recent paper by Dr. Lentz reads: "An acute epidemic infection occurring in troops on active service and in workers in mines, sewers and abattoirs has been reported as occurring singly and in enzootic form in the dog. The disease is characterized by jaundice, hemorrhages from the mucous membranes, fever, enlargement of the spleen and nephritis. There is marked evidence of blood destruction and blood and bile appear in the urine. The disease is caused by a specific spirochete (Spirochaeta icterohaemorrhagica, Leptospira Icterohaemorrhagiae). Jungherr has shown, however, that the Leptospira conicola may be incriminated. He also calls attention to 'intestinal treponemiasis' in dogs, causing profuse diarrhea, anorexia, and occasionally fever. The rat harbors great numbers of these infective agents which are excreted in the urine. They may penetrate the skin directly or the disease may be contracted by rat bites. It is said that fleas may act as an intermediate host. Diagnosis is made by finding the spirochete in the urine. The disease may assume chronicity, in which case the outstanding symptoms of a severe icterus and an albuminaria, etc., are not in evidence and the mucous membrane and skin may be only slightly yellow tinged, which if associated with an albuminuria should make one suspicious and a miscroscopic examination of the urine, which will often reveal the parasite in these cases, should now be undertaken."

Everything in the above would, of course, apply to dogs as well as fox hounds.



"That's the way it always is ....we can never agree.....if I want to go bear hunting you always want to go for deer.

Editor's Note: M. Graham Netting, Curator of Herpetology, Carnegie Museum, Pittsburgh, answers a housewife's query about snake deterrent.

"I regret to say that there is no preparation, so far as I know, which can be used as a snake deterrent. Snakes enter houses to secure food, such as mice, or to find suitable hibernating situations. Since garter snakes feed laregly upon earthworms there is little likelihood that they are attracted to your cellar by a food supply.

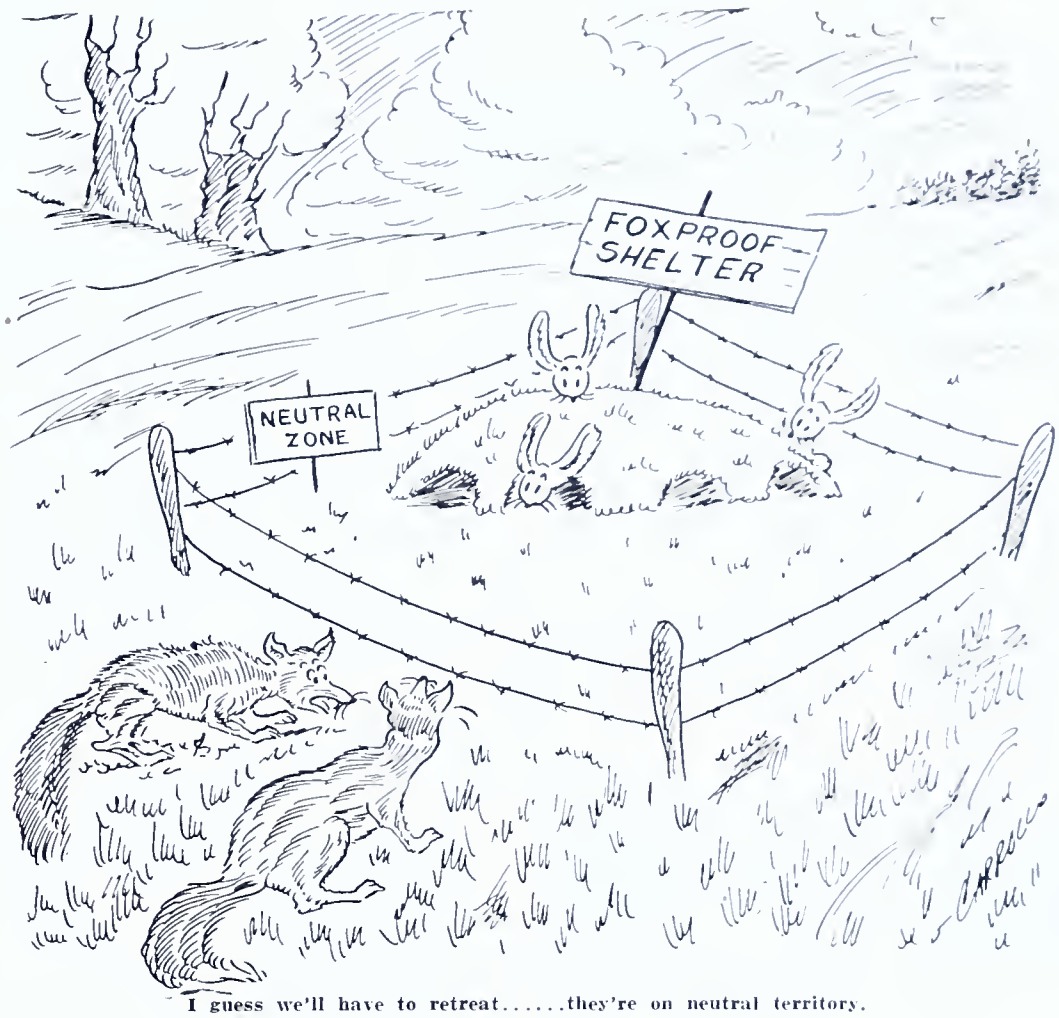
"Most dogs and cats can be trained to kill snakes. This is the most feasible method of reducing their numbers in the vicinity of houses. Sometimes hogs are used to eradicate poisonous snakes in badly infested areas. The important natural enemies, hawks, owls, eagles, and weasels do not frequent human habitations. Chickens eat many small snakes and will rid a barnyard of baby garter snakes. One of the most effective and inconspicuous enemies is the House Snake, a species noted for its fondness for snakes and mice. This species is falsely accused of milking cows, or is mistaken for the Copperhead, and is killed all too frequently. I should recommend, if you do not consider the remedy worse than the existing situation, that you pay a couple of local boys to collect a few House Snakes and to liberate them near your home. However, be sure that the boys know the species (the black and white checkerboard pattern on the belly makes identification easy) and do not bring other snakes."

THE DOGWOOD LEGEND

Dogwood season is perhaps Nature's most appealing effort in loveliness. Driving along the highways, the pure white or pink of the dogwood blossoms just below the green of the larger trees, appears like phantom forms, suggesting perhaps again the bride of spring in her wedding garb.

There is a lovely legend of the dogwood. We like to recall the story each season. The legend comes from out of the past centuries. Because of its hardness, it is said that the wood was chosen for the cross on which Christ was crucified.

The dogwood was saddened to be used for such a purpose and the Savior, seeing its distress, promised: "Never again shall the dogwood grow large enough to be used for a cross. It shall be slender and bent and twisted, and its blossoms shall be in the form of a cross with two long and two short petals. In the center of the outer edge of each petal there shall be small prints, brown with rust and restained with blood. The center of the flower will be a crown of thorns. All those who see it will remember it was on the dogwood that I was crucified and this tree shall not be mutilated or destroyed, but cherished and protected as a reminder of the agony and death upon the cross." It is just a legend and history does not back it perhaps, but it is a beautiful way of explaining the markings of the flower.—Steuben (Indiana) Republican.



I guess we'll have to retreat.....they're on neutral territory.

Pennsylvania's Rabbit Transfer Program

(Continued from Page 7)

rabbits were trapped within the Commonwealth during the 1938-39 winter. Some rabbits were trapped in 61 of the 67 counties. The most rabbits were trapped in Berks County with a total of 1,745. Other counties which trapped more than 1,000 animals were: Montgomery 1,540, Allegheny 1,236, Crawford 1,215, Centre 1,156, Schuylkill 1,149, Westmoreland 1,102. Montgomery County reported the trapping of the most pieces of game during this trapping period as follows: 1,540 rabbits, 866 ringneck pheasants, 616 grey squirrels, 13 racoons and 5 red squirrels, making a total of 3,040 pieces of game.

Rabbits were trapped and removed from our state game farms as follows: Fisher Farm, Montgomery County, 380; Jordan Farm, Lawrence County, 309; Loyalsock Farm, Lycoming County, 179; and the State Wild Turkey Farm, Juniata County, 201; total, 1,069.

In addition to the state game propagation areas, rabbits were secured from such institutional grounds as the Eastern Penitentiary in Montgomery County, the Norristown County Hospital grounds, the State Epileptic Colony in Snyder County and the Western Penitentiary grounds in Centre County.

In addition to Wildwood Park in Harrisburg, many other parks produced a splendid rabbit supply. Among these were Frick and South Parks of Pittsburgh. Many boroughs and cities produced an excellent supply of game. Among these might be mentioned the borough of Jersey Shore in Lycoming County; the City of Allentown; the borough of Camp Hill in Cumberland County; Wyomissing, West Reading and other Reading suburbs; the town of Endeavor and Marienville in Forest County; the City of Butler; the cities and towns of Titusville, Meadville, Conneautville and Linesville in Crawford County; the cities and towns of Ebensburg, Westmont, Wilmore and Southmont in Cambria County, and Latrobe and Scottdale in Westmoreland County.

Many rabbits were secured in Schuylkill County from refuges and propagating areas established by varous sportsmen's associations.

Game Protector Rickert, of Bucks County, reports that fifty-one (51) rabbits were trapped on an area of three acres in a truck patch near the borough of Perkasie. Trapping Agent Harold Jones, of Dauphin County, reported catching a rabbit in Wildwood Park that weighed four pounds and fifteen ounces. This is believed to be the largest rabbit caught.

With some reports yet to be received regarding the rabbit trapping program conducted this past winter, it is estimated that the total will reach 30,000. This represents an increase of 30% over the rabbits trapped the previous winter and this would have been increased still further if deep snows and extremely cold weather had not hindered trapping in many counties for several weeks. At the conclusion of the present fiscal year a report on this past winter's trapping will be prepared for publication in the GAME NEWS.

In the proper administration of this program, we must remember that each county should strive to provide sufficient protected areas to permit rabbit trapping each winter and yet not deplete the breeding stock. There will be winters when some areas should be given a rest and thus be permitted to restock themselves. It is then that new areas should be trapped, while the supply of rabbits is being brought up again in other areas.

The rabbit trapping program is a part of good game management. It enables us to harvest a crop of game from areas where no hunting is permitted. Thus, an otherwise idle source of supply is wisely utilized. It enables us to secure the advantage of restocking game that normally would be at least partially desroyed by stray dogs and cats and other predators common to built up sections. This rabbit trapping relieves damage situations in nurseries and in orchards, as well as near gardens and truck patches. It also is aiding the Game Commission to build up a local rabbit supply that will help us to be self-supporting when the exportation of rabbits from other states is no longer possible.

Sportsmen's associations throughout Pennsylvania are, therefore, urged to lend every possible assistance to the local game officers in securing new trapping areas and in helping our officers further to encourage the rabbit transfer program to the benefit of all hunters.

HOW TO BETTER SELL WILDLIFE TO THE PEOPLE

(Continued from Page 9)

ment is a frame of mind, an attitude of heart, and does not come from the possession of material things. We must teach the people how to find peace and contentment in the simple pleasures of the out-of-doors; we must teach them how the principles of equality of opportunity is being exemplified in the administration of our national parks and national forests. We must develop sound minds in sound bodies through outdoor recreation. We must develop patriotism and love of constitutional freedom in a representative democracy through the fullest and freest use of the wonderful natural resources that God created for the benefit of man, made in His own image.

One-half of all of the people of the world today are engaged in war, engaged in the business of destroying each other and each other's homes, while we can still give thanks that under the wise leadership of an able and conscientious Secretary of State we have not been involved, and the white wings of peace are still spread over our fair land. But our land isn't any fairer or richer in natural resources than the vast area we once called Russia. It, too, could have been a land of peace and plenty if its rulers had been wise enough and just enough to permit those resources to be enjoyed by all of the people instead of by the favored few.

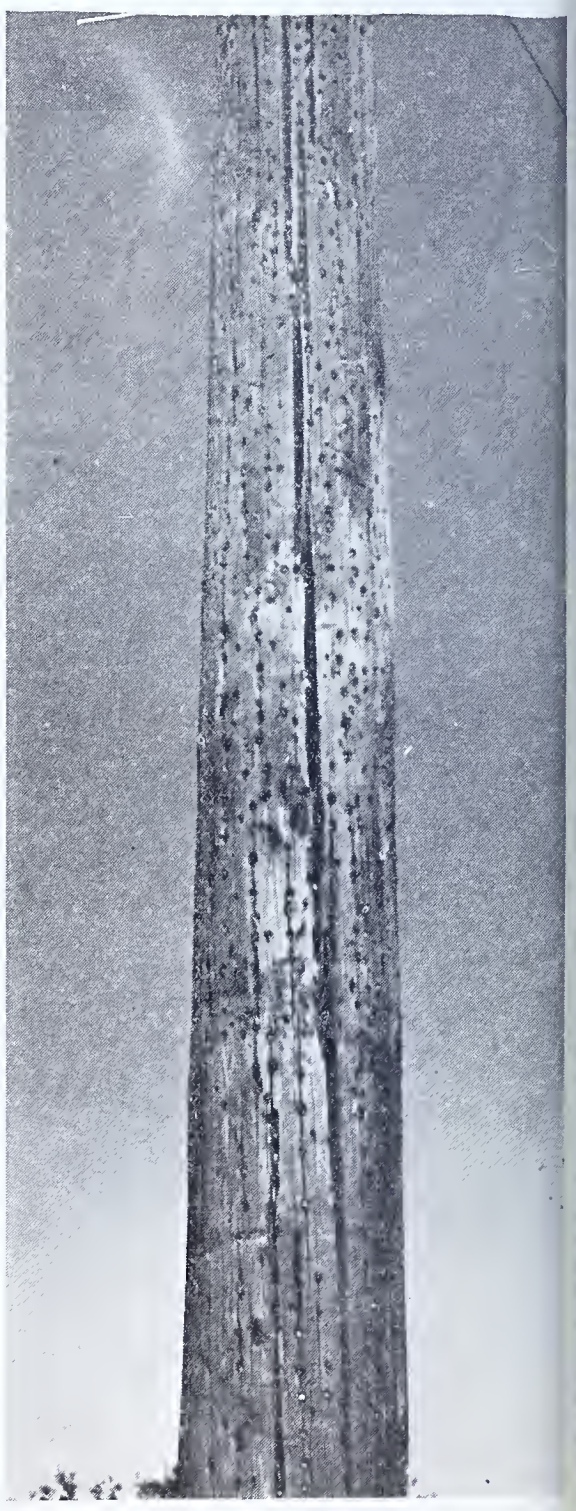
While our State laws have all denied to the privileged few the right of private ownership in wildlife until reduced to possession; while ours was the first Nation in the world to establish a national park for the benefit of the people; while our Nation has set aside more areas for public use and enjoyment and spent more money on their development than any other nation in the world, we must not assume that the job of contributing to good citizenship in this manner has been completed. It has only been commenced. Highway development and the mass production of automobiles has done much to bring recreational areas closer to the underprivileged man in the city, but many additional such areas need to be established and developed. And if we succeed in our campaign to sell the advantages of wildlife and outdoor recreation to the approximate 85 percent of the people now unsold on that program, the demand thus created will far outstrip the supply unless our educational program included the esthetic enjoyment of these resources. Civilization has by no means eradicated the primitive killer instinct in man, which finds expression in the needless killing of wildlife as well as in the barbarous killing of war. Woodrow Wilson said: "Our civilization cannot survive materially unless it be redeemed spiritually." In attempting to sell wildlife to the people, let us seek to place proper emphasis upon the spiritual values involved, recalling that

"The heavens declare the glory of God
and the firmament showeth His handiwork."

A complete history of wildlife conservation in Pennsylvania dating back to the days of William Penn is being prepared for the Commission. The undertaking is part of a general state-wide historical project, conducted by the Federal Works Project Administration.

It is estimated that over 50,000 records bearing on wildlife and its conservation will be assembled before the work is completed. Material is already being collected in 55 counties and eventually will cover all. Most of the early records are tremendously interesting and cover among other things the early fur trade; the extent to which game was killed for market; the payment of bounties as far back as 1683, at which time the seal of the King of England was necessary to ratify claims; records of the timber wolf, the mountain lion, the buffalo, passenger pigeon and other species no longer found in the state, and many other interesting items showing the very important part wildlife played in the settlement and early development of the Keystone State.

The work is being supervised jointly by Messrs. John C. Funk and John Ross of the Works Project Administration, and James N. Morton and Leo A. Luttringer, Jr., of the Commission. Anyone having historical records of this sort or who knows where they can me obtained will be contributing much to the success of the project by writing in about them.



Beaver tracks photographed by Game Protector W. W. Britton, of Chambersburg. (left).

In the San Joequin Valley near Verdugo City, Calif., stands the telegraph pole shown in the photo (right). This pole was drilled, by about twenty five woodpeckers, until it was completely covered with holes. The woodpeckers, which are approximately one-third larger than our Pennsylvania Woodpeckers fill the holes with Evergreen Acorns during the summer months and use them as food during the winter. The birds become very perturbed, according to W. G. Ammon, 1730 Regina St., Harrisburg, Pa. who witnessed the scene and related it to us, when any tourists attempt to remove any acorns for sourvenirs. Mr. and Mrs. Waldsmith who forwarded us the photo were formerly residents of Pennsylvania and they as well as Mr. Ammon are ardent readers of the Game News.

OBEY THE LAW » » » HELP YOUR PROTECTOR

Stop the cheater by reporting his license number! Automobile license numbers will help too!

The vast majority of Pennsylvania's hunters are real sportsmen, and observe the law. They can help themselves by reporting promptly those who violate. (Use the list below:)

DISTRICT GAME PROTECTORS

COUNTY			Phone
Adams	George D. Bretz, 328 Walnut St., Shippensburg		
Allegheny	R. A. Liphart, 334 East Eleventh Ave., Homestead		1550
Armstrong	R. H. McKissick, 115 Rebecca St., Kittanning		785
Beaver	J. Bradley McGregor, 1099 Turnpike St., Beaver		1508
Bedford	John S. Dittmar, Loysburg		7
Berks	Joseph A. Liendecker, 18 Berks Place, Wyomissing		166J
Blair	C. C. Brennecke, 1520 Twenty-first Ave., Altoona		2-6974
Bradford	Rodman C. Case, 927 Main St., Towanda		337
Bucks	S. Earl Carpenter, 41 Taylor Ave., Doylestown		5168
Butler	Elmer B. Thompson, 396 Coleman Ave., Johnstown		3591
Cambria	Troy C. Burns, N. Main St., Est., Butler		32100
Cameron	Maxwell N. Ostrum, 321 Third St., Emporium		4482
Carbon	W. C. Achey, 311 First St., Weatherly		4741
Centre	Thomas A. Mosier, 120 N. Spring St., Bellefonte		38
Chester	Jarvis E. McCannon, 83 South Fifth St., Coatesville		191
Clarion	H. J. Updegraff, Shippenville		58R11
Clearfield	Frank E. Couse, 11 Weaver St., Clearfield		1354
Clinton	Miles L. Reeder, Route 1, Lock Haven		108
Columbia	M. L. Hagenbuch, 295 Penn St., Bloomsburg		692
Crawford	George W. Keppler, 255 Locust St., Meadville		1146
Cumberland	Joseph M. Foreman, 239 West South St., Carlisle		234J
Dauphin	Mark P. Motter, 4231 Elmerton Ave., Colonial Park		3-5153
Delaware	B. J. Davis, 436 East Baltimore Ave., Media		295
Elk	Edward L. Shields, Eschbach Road, St. Marys		5341
Erie	John G. Kennedy, 238 East 22nd St., Erie		03215
Fayette	Theodore T. Schafer, 16 Wilmington St., Uniontown		3794
Forest	Carl B. Benson, Tionesta		189
Franklin	W. W. Britton, 573 East Catherine St., Chambersburg		195
Fulton	Isaac Baumgardner, South Second St., McConnellsburg		22
Greene	John F. Blair, 123 N. Richhill St., Waynesburg		267
Huntingdon	Thomas F. Bell, 407 Sixteenth St., Huntingdon		158
Indiana	O. M. Pinkerton, 21 South Twefth St., Indiana		1934
Jefferson	Lester J. Haney, Brookville		707W
Juniata	Herman W. Fisher, 611 Washington Ave., Mifflintown		176
Lackawanna	Francis E. Jenkins, Layton Road, Chinchilla	Clarks Summit	367R2
Lancaster	J. M. Haverstick, 741 College Ave., Lancaster		5540
Lawrence	Frank L. Coen, Route 5, New Castle		5211
Lebanon	Philip H. Melching, 409 Gannon St., Lebanon		681
Lehigh	William A. Moyer, 25 North Eighteenth St., Allentown		2-6739
Luzerne	Samuel K. Weigle, 75 East Bennett St., Kingston		7-5382
Lycoming	Frank F. Crosby, 1442 Memorial Ave., Williamsport		2-7313
McKean	William J. Carpenter, Mt. Jewett		2521
Mercer	Duane E. Lettie, 113 W. Market St., Mercer		6
Mifflin	Ralph E. McCoy, 317 Logan St., Lewistown		2916
Monroe	Arthur N. Frantz, 75 Elk St., Stroudsburg		1272
Montgomery	Ambrose Gerhart, 141 Central Ave., Souderton		873
Montour	Bruce P. Yeager, 66 Queen St., Northumberland		1210
Northampton	Morris D. Stewart, 1535 Northampton St., Easton		2-2023
Northumberland	Bruce P. Yeager, 66 Queen St., Northumberland		1210
Perry	Hugh H. Groninger, New Bloomfield		80
Philadelphia	E. W. Stucke, 7806 Verre Ave., Philadelphia	Phone—Pilgrim	4813
Pike	John H. Lohmann, Hight St., Milford		240
Potter	Arthur G. Logue, 107 W. First St., Coudersport		278
Schuylkill	Leo E. Bushman 76 Pottsville St., Cressona	Schuylkill Haven	370
Snyder	Clarence F. Walker, Beavertown	Phone—Beaver Springs	16R31
Somerset	John Spencer, 354 West Garrett St., Somerset		139
Sullivan	Robert Latimer, Muncy Valley	Phone—Strawbridge	15R2
Susquehanna	William D. Denton, New Milford	Phone—Jackson	16
Tioga	L. H. Wood, 3 Eberenz St., Wellsboro		196R
Union	Fred S. Fisher, 400 Green St., Mifflinburg	Lewisburg	6257
Venango	William T. Campbell, 523 Liberty St., Franklin		1107
Warren	George L. Norris, 1007 Conewago Ave., Warren		2939
Washington	Carl C. Stainbrook, 52 Harrison St., Washington		566
Wayne	Maynard R. Miller, 30 Stanton St., Honesdale		676
Westmoreland	R. D. Reed, 1610 Ligonier St., Latrobe		1140W
Wyoming	Albert A. Wargo, 161 E. Tioga St., Tunkhannock		3671
York	A. C. Ganster, 520 Girard Ave., York		7434

Space does not permit listing the Game Protectors on special assignment, those in charge of Land Management, and the large corps of Deputy Game Protectors.

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Protect Game

PENNSYLVANIA GAME NEWS

UNE 1940

TEN CENTS

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THE 1940 DUCK STAMP

Black Ducks by Francis L. Jaques

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EDITORIAL

JUNE 1940

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UNION LABEL 6

WHERE DO WE STAND?

THE need for protecting our natural resources is greater now than it ever was before. The value of such protection is being daily manifested in scaring headlines and animated radio reports concerning conditions in other lands. The managing of our natural resources is no simple task, and all of the responsibility does not lie with the conservation departments which have jurisdiction over this important work. Much of the responsibility lies with the individual sportsmen and sportsmen's organizations. Some of them realize that responsibility and are contributing much to the success of the conservation program in Pennsylvania. But there is still lots to be done, and there are still many individuals and organizations which are overlooking golden opportunities of service.

A questionnaire sent to over 1,000 active clubs in Pennsylvania some months ago asking for a list of the conservation projects they were engaged in at that time, and others which they contemplated in the near future, bore very little fruit. Between two and three hundred associations responded, but relatively few outlined any activities. This omission was indicative of one of two things. Either the associations did not think their programs worthy of record, or they were not actively engaged in any comprehensive conservation activities.

The Commission is willing to cooperate in every possible way with sportsmen's organizations and individuals in an endeavor to promote better hunting and to increase the amount of public hunting grounds, but the department can only suggest various constructive programs and the organizations will have to take the bull by the horns and follow through in their own way. The time to get busy is **now**; and the objective should be your farmer friend. There is still time to get his permission to let you plant a few food strips. And now is the time to sell him on the value of the **Special Wildlife Project Program** to him and to his neighbors.

The time is coming when the recreation and sport which wildlife provides will be regarded as a means not only of keeping millions of people happy by keeping them outdoors, but by bolstering their mental, physical and moral welfare in order that they will be properly equipped to engage in less pleasurable pastimes if necessary. Sportsmen's organizations working through the National Rifle Association have an unlimited field for teaching young people how to handle firearms safely.

Sportsmen's organizations have a wonderful opportunity to help the cause of conservation education, the integration of which in our public school system and State Teachers' Colleges has now reached the point where only the spark of concerted interests are needed in order to kindle the fire. If we are to perpetuate our valuable natural resources we must emphasize their importance to the children who are now going through our schools. But particularly, we must impress it on the minds of the teachers so they will not overlook it. If we do not, as sportsmen's organizations, bring this matter forcibly to the attention of the county superintendents, the school boards and the teachers themselves, then 20 years from now we shall be faced with relatively the same problems, only they may then be a lot worse than they are today.

Many a cause has been lost because too much time was spent attempting to solve it without first trying to trace its cause. If the truth be known we could trace most of our present problems in conservation to the fact that the value of our natural resources was not drilled into us sufficiently when we were young. Conservation must become an intricate, conscious part of our lives; it must become an attitude, a psychology of living—something which is not just taken for granted—if we are to accomplish our purpose to make of this fair land a still better place in which to live, work and play.

* * *

"SELF DEFENSE?"

NOT long ago a newspaper in Southeastern Pennsylvania carried an item to the effect that an American Bittern had been killed because it attacked a man and his neighbor. The bird was supposed to have been killed in self-defense. On the face of it such a statement is ridiculous, and far too often such an excuse is used to cover up a direct violation, since the bird is protected both by state and federal laws.

Eagles, Great Blue Herons and other valuable birds have been killed presumably in "self-defense", yet except in the case of the Eagle, whose actions at the time may lead certain timid individuals to mistake the bird's intentions regarding their personal welfare, the idea that they attack individuals is a long since exploded nursery story.

The Hungarian and Chukar Partridge

Their Status in Pennsylvania

by Richard Gerstell

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THE Pennsylvania Game Commission in 1925 took the first steps in its attempt to establish the European grey partridge (*Perdix perdix perdix*), or Hungarian partridge as it is commonly called, within the Commonwealth. Private individuals had at times previous released small numbers of birds at widely scattered points within the State, but without exception these plantings had been failures as the birds shortly disappeared.

The principal method followed by the Commission was to purchase and release wild-trapped birds secured from other countries. Roughly 96% of the birds stocked were obtained from Central Europe, including portions of Hungary, Austria and Czecho-Slovakia. In recent years, approximately 2,100 partridges artificially propagated at the State Game Farms were turned out, while roughly 100 others were obtained from Canada in 1932.

The stocking program has now been intermittently carried on for a period of fifteen years. For purposes of discussion, however, these activities may best be treated as three separate periods. The first extended from 1925 through 1930; the second, from 1931 through 1934; and the third, from 1935 to the present.

From 1926 to 1930, inclusive, a total of 9,806 birds was received alive and released. The largest annual planting, made in 1926, involved 3,941 birds, while the smallest consisted of 1,106 individuals stocked in 1928.

During the period when these releases were being made, little information concerning the species was at hand. Thus, the early plants were made in numerous representative areas in the State for check purposes. Included in the sites were sections in the intensely farmed counties in Southeastern Pennsylvania, the anthracite coal fields, the Allegheny Plateau, the Susquehanna River Basin and the rolling farm lands in Western Pennsylvania. Naturally, the partridges were placed on agricultural rather than forested areas. In all, birds were placed in 43 of the 67 counties of the Commonwealth. As a rule, not more than twenty individuals, in even pairs, were put out at any given point. The largest county allotment for the period was 740 birds, while the smallest, an accidental escape, was one.

During the latter part of the winter of 1929 30, an extensive survey designed to disclose the status of the partridges was completed. In this, all the Commission's field employees cooperated by checking the number of birds in their respective districts. Counts were made at feeding stations and by the use of bird dogs.

The survey disclosed a total of 311 covies of partridges containing 3,543 individuals. This represented only 36% of the total number of birds released, but the fact that the census obviously could not have included all the Huns actually resident to the State must not be overlooked. Bevies were found in 31 of the 43 counties in which releases had been made. Four counties showed totals higher than the stocking figures, the largest increase being roughly 90%. Strange to say, the single individual accidently released in Wyoming County had been joined by two companions, though the nearest point of release of other birds was approximately 30 miles distant.

The results obtained from the earlier plantings clearly revealed the fact, now so well known, that the Hun most frequently thrives on the richer soils where small grains are the principal agricultural crop. With the information gained, the stocking program was altered in 1930 so as to allow for a wiser use of the birds released.

STANDARDS OF PERFORMANCE

When the Commission effected its reorganization on January 1, 1939 it adopted certain guiding policies which it is attempting to use as a measuring stick. One of these policies concerns performance. In the management of any business, and this applies to game management, a continuous effort should be made to establish and refine standards of performance. Without such standards an organization works in the dark, not knowing when its work is satisfactorily done. In establishing standards of performance, each person affected should assist in the development of his own standards. In this way the morale of the group is strengthened and each employee is more anxious to perform his work satisfactorily.

In 1931 and 1932, additional birds in the number of 1,572 were turned out in 19 counties. Following the plantings, a second survey similar to that just described was made.

This second census revealed a total of 4,419 birds located in 33 counties. One county in which no birds had ever been released reported the presence of birds, while once again four showed populations greater than the total releases, the largest increase being 170%. The population total disclosed by the count represented 37% of the total number of birds planted. The single Wyoming County bird and its two companions had disappeared.

A total of 1,194 birds was released in 1933, while no plantings were attempted in 1934. Field checks indicated that the birds were slowly increasing in the grain growing sections, while the converse was true in other areas.

The restocking program was resumed in 1935 when 200 artificially reared birds were released. Also, the purchase program was then resumed and enlarged. From January 1935 through October 1939, a total of 21,287 birds was turned out. Of these, 19,132 were wild-trapped specimens imported from Europe, while 2,155 were raised on the State Game Farms. The birds were released, usually not less than 100 at one place, in the grain growing areas in 20 counties.

Bird dog census were made during September and October 1938 and 1939 in sections of the Upper Susquehanna River Basin where the partridges appeared to be making their best stand. It was found that the distribution of the species was exceptionally "spotty", but numerous areas, from 100 to 300 acres in extent, were found to be supporting population densities of from one to two birds per acre. Because of the unusual distribution, which disclosed many areas apparently not carrying a single bird, it was impossible to arrive at any sound figure on the total number of birds in the district.

At its meeting in July 1939, the Game Commission deemed it wise to subject the resident population in one particular region to a period of open shooting. Accordingly, the three counties of Lycoming, Northumberland, and Montour, which embrace the basin just discussed, were declared open to the killing of Hungarian partridges for a period extending from November 1 to 21, inclusive, Sundays excepted.

The area in question represents a portion of the State's best pheasant range which is, consequently, quite heavily hunted. The total kill of partridges within three counties was, however, estimated to be only 275. Field checks constantly conducted during the open season clearly showed that the small kill could not be attributed to the presence of relatively few birds. In the first place, it was found that the great majority of Pennsylvania hunters, being unaccustomed to the quick rise and relatively long flights characteristic of the species, failed to make the most of their opportunities. Secondly, after the first day's intensive shooting, the birds had become so frightened that even experienced hunters with good dogs rarely found it possible to get within gunshot of the ever alert covies. Though many persons had believed that the open season would result in the complete annihilation of the entire population in the district, it is definitely known that only an exceedingly small portion of the birds fell prey to the gunners.

Since the open season in the three counties apparently did not reduce the resident partridge population appreciably, it has been decided to refrain from making additional plantings in the region this season and to again subject the birds to gun pressure during the fall of 1940, checking carefully the results of such action. As a matter of fact, the Commission is giving serious consideration to the wisdom of declaring a short, carefully regulated, state-wide open season for the shooting of Hungarian partridges during late 1940.

The experiences so far encountered would seem clearly to point to the fact that the Hungarian partridge is now permanently

(Continued on Page 32)

Wild Flight IN S-L-O-W MOVIES

RICHARD E. BISHOP

MEN who have hunted ducks all their lives usually observe their actions from the standpoint of shooting them, not with an eye to the physical details of their flight. I have often heard gunners, men with years of hunting experience, criticize etchings and paintings of wildfowl. They say, "A duck never does that." They would be more correct were they to say, "A duck seldom does that." After you have seen slow-motion movies of ducks flying upside down, ducks colliding with each other in the air, swallows looping the loop, and humming birds flying backward, you will agree that almost anything can happen, and does happen, in the flight of wild birds.

In depicting the flight of wildfowl, I wanted to know what really does happen when a duck takes off, alights, or simply flies through the air, and years ago, in 1925 to be exact, this desire led me to take slow-motion movies of these birds in flight. Thus, a superspeed Filmo 70 joined my shotgun as standard equipment on all my gunning trips, and my shell box found more and more room being given over to film.

The author in the field, training the 6-inch lens of his Filmo 70 superspeed camera upon a flock of wildfowl.

This camera takes pictures at 128 frames a second, and when the film is projected at the usual rate of 16 pictures a second, the action is, of course, slowed down to 1/8th as fast as it actually took place. A picture of a duck going by at a normal 30 or 40 miles per hour is just a blur when filmed at normal speed, but when taken at superspeed, the duck goes past like a seagull in lazy flight.

The popular conception of the mechanics of a bird's flight is that the wings are brought up and then beaten quickly down and backward, to push the bird forward in the air. Such, strangely enough, is not the case. The camera reveals that the wings are brought quickly downward and forward, so that at the lower point of the down beat the wing tips are often as far forward as the head.

Editor's Note: Richard E. Bishop, etcher and master craftsman is well known to most Pennsylvania sportsmen and we are grateful to the Editors of Filmo Topics for permission to reprint this interesting article on his motion picture experiences. Readers of Game News will recall the fine cover contributed by Mr. Bishop, which adorned the October, 1938 issue.

The down beat of a bird's wings must accomplish two things—it must sustain the bird's elevation, and at the same time cause the bird to progress in the air. The down beat exerts force directly upward, which maintains elevation. In addition, a vacuum is created at the upper surface of the bird's wings, which also helps to sustain elevation. The curve, or camber, of a bird's wing is similar to that of an airplane. Without going into aero-dynamics, the bird slides forward upon a forward beat of its wings for reasons

similar to those which permit a sailboat to make steady progress against the wind.

The superspeed camera has shown some interesting oddities in the flight of birds. A picture was taken of two mallards flying into decoys. The leader flew into an unexpected air pocket which caused the duck to lose its balance, roll over on its back, and fly upside down for several beats before righting itself. The second bird found the same air conditions and went through the same aerial gymnastics as the leader. Another picture taken of a flock of yellow legs shows the entire flock being blown out of balance and flying on their backs due to a sudden gust of wind.

Ducks crash just as planes do when some unexpected air condition is encountered. I have a picture of a widgeon coming into decoys in a corner of a pond surrounded by cypress trees. As the duck turned into the wind to pitch among the decoys, some change in the wind direction, or a down draft, caused the duck, when three feet above the water, to completely lose its balance and fall head first into the water, going completly under the surface. I have never seen a more surprised duck when it came to the surface.

Ducks are roughly divided into two groups —surface feeding ducks and diving ducks. The surface feeding birds are the marsh ducks which "tip up" for their food in shallow water, but seldom dive for it. The diving ducks, on the other hand, are those that "use" in the deep water of rivers, lakes, and oceans, and which dive for their food. The reason why diving ducks are seldom found in small ponds or pot holes is revealed by the superspeed camera.

Practically all diving ducks, such as the canvasback, red head, bluebill, ruddy duck, goose, and swan, must use both their wings and their feet to get into the air. They flap their wings and run on the water for a distance from five to thirty feet in order to get enough "land speed" to rise into the air. Perhaps you have seen loons run for a distance of fifty feet on the water before gathering enough speed to clear the water and start flying.

The surface feeding ducks, such as the mallard, black duck, pintail, widgeon, etc., have the knack of pushing straight down on the water with the first wing beat, lifting themselves clear and mounting into the air almost vertically if necessary. This ability to leave the water vertically enables them to feed in small pot holes which would not provide sufficient "take-off" distance for the diving ducks.

By comparison, it would seem that the deeper wildfowl are able to dive for their food, the more room they need in which to get off the water.

Knowing the number of individual frames exposed by the superspeed Filmo 70 in one second, it is a simple matter to project a given number of pictures of a bird in flight and to determine the number of wing beats per second. The number of beats varies, of course, with any bird, and is governed by air conditions and by what the bird is doing when the picture is taken. A duck beats its wings from seven to ten times per second. The slow-motion camera also demonstrates that the upbeat of a bird's wing is much faster than the down-beat.

When I wish to portray a wildfowl in flight, I study every movement of that bird before I start to work. I make an endless loop of two or three feet of film of the bird in flight, pictures made at superspeed, and run it continuously on my projector. (A wire loop may easily be attached to the projector, to keep the film from passing in front of the lens.)

I watch this continuous picture for perhaps half an hour—until I have absorbed every detail of this particular flight action, until awareness of it becomes a part of me. Such study reveals the relationship between the wing action and the carriage of the head, tail, and feet. I have never found a better way to study rapid action for accuracy and naturalness in portrayal. Superspeed films of birds and animals are now being used in this manner by several art schools, to teach the students to sketch rapidly and to sketch from subjects "in action."

As for the mechanics of such filming, I have found the 6-inch lens best, for it magnifies highly and it brings the bird close enough to show all details of the flight motion. It is not particularly easy to make these pictures, however, for the depth of field of the 6-inch lens is rather limited at the shorter distances, and it is impossible to judge, within a few feet, where the next duck or goose is going to fly past. Also, the field of the 6-inch lens is relatively small, and it takes considerable practice to keep the bird within that field as he travels by at many miles per hour. It is so easy to get behind or ahead of your subject, and to photograph only the blue sky! Again, the superspeed Filmo 70 drives 15 feet of film through the camera in about five seconds. You must, therefore, decide quickly upon the action you wish to photograph, because the spring may run down before the most interesting part of the bird's flight occurs.

Lake Erie mallards, by Richard E. Bishop. Note the lower bird jumping into the air without a long "take-off," as Mr. Bishop describes in his article.

Is Wildlife Management Worthwhile To The Farmer?

A bare gully typical of the small eroding unfarmable areas that may be found on almost any farm.

THERE is a considerable divergence of views as to just what constitute economic wildlife values. However, these differences in viewpoint are not confined to wildlife management but are typical throughout the field of conservation. The economist's approach to this question is well summarized by Professor George S. Wehrwein in "The Economist's Approach to Ecology":

> *"The economist is equipped or should be equipped to set up a balance sheet of costs and income connected with the utilization or conservation of a given resource to guide the owner or the state in making decisions. Presumably he can tell whether a given technique "will pay" or not, but the economist immediately runs into the difficulty of deciding what "making it pay" means. Given a farm in full private ownership, does it pay to devastate the land and the environment, spending as little as possible and taking out as much as possible and letting the farm go down the river in twenty years? Yet that seems to have been the test on many a farm in America. On the other hand, does it pay the owner who believes it his duty to pass the farm to the next generation in as good if not better condition than he received it from his father?"*

It seems to me that if wildlife management is to have a sound economic basis, it is necessary to accept the broader and long-time view expressed above and not the short-term depletion type of land management. If this is the case, what are the various economic values derived from wildlife resources and what is their value from farmer's standpoint?

First, there are those values that pertain directly to the farmer. These include direct cash values and direct values that are tangible but may not be expressed as a cash crop. Then beyond these are indirect values, some tangible and some intangible. In the first category, those values that may result in a cash return to the farmer include fur pelts, game fish, and hunting rights. Of the values that are direct but are not in themselves a cash crop game animals and sport fish are included. These provide food in the form of meat and fish.

Among the indirect tangible values, there are insect control and rodent control. The average farmer, even though he possesses these values on his farm to a considerable degree, is not readily appreciative of their presence.

There are several intangible values resulting from wildlife management. The first of these is sport. Farmers may or may not consider this a value, depending upon their personal point of view. Among the other intangibles is the fullness of living that may be derived from having wild creatures about. Finally, there is the part played by animals in balancing nature's budget. The value of these animals in providing checks and balances among each other and with other forms of plant and animal life is of inestimable importance although scarcely recognized by the average individual, much less appreciated.

Measurement of Wildlife Values

Now, let us go over these various values again and see what types of economic returns we can attribute to each. Naturally, wherever possible these should be reduced to monetary terms, since this is the usual accepted basis of all values. However, I must reiterate that we cannot confine our values to those measurable in terms of dollars if we are to successfully promote the cause of wildlife management from the economic standpoint. In considering these values, let us sum them up from the standpoint of the nation as a whole and of Pennsylvania in particular.

Although the value of wildlife can never be accurately figured in terms of dollars and cents, there are some figures that apply. For instance, the value of wild furs in the United States ranges from approximately twenty to seventy million dollars annually It ranges from one to two million dollars annually in Pennsylvania. These furs, of which the muskrat and the skunk are a considerable part, are taken to a considerable extent by farmers and farm boys. The importance of this cash return to the farmer will vary greatly from one form to another. Some farmers who possess a good quality muskrat marsh may derive as high an income per acre from this land as from an average fertile field, but these cases are the exception rather than the rule. Ordinarily the return per farm from wild furs is exceedingly low and where this is the case, the income is usually taken by the farm boy. To him, however, this income may seem considerable even though amounting to only five or ten dollars a year. Generally speaking, the return from wild furs is not such as to encourage the farmer to put forth much effort for the improvement of this crop.

Cash returns from hunting rights also vary in various parts of the country. There are indications that this economic value is of considerable importance to some communities in parts of the country. However, there is little indication to date that cash returns from the sale of hunting rights will prove of great importance to Pennsylvania farmers. This return for hunting rights sometimes takes the form of state subsidies where the state wildlife agency uses funds provided by the sportsmen to pay for open hunting grounds, but in no instance to date has the amount invested in these payments been large enough to be of great importance to the farmers of any state as a whole.

A further tangible value of wildlife is the meat value. For the United States as a whole, the estimated meat value of game and fish is about 190 million dollars annually. In Pennsylvania, the

The same gully following treatment by seeding and planting and now furnishing valuable wildlife cover.

* Chief, Regional Biology Division, Soil Conservation Service.

By Frank C. Edminster*

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value of the 10 to 15 thousand tons of game is worth around 6 to 8 million dollars. The food value of game fish in Pennsylvania cannot be readily estimated since figures are not available as to the quantities taken.

An indirect but very tangible and very important value resulting from wildlife is its value for insect control. The U. S. Biological Survey has estimated that the cash value of insectivorous birds in insect control amounts to about 22½c per acre for the humid reigons of the country. This would mean an annual value of 6½ million dollars to Pennsylvania alone. Indeed, it is highly probable that without the birds, control of insects on farmland would be impossible and, hence, farming would be impossible. If this be true, then it is apparent that any monetary value attributed to birds is not a complete appraisal.

The place of wildlife in the control of rodents is essentially the same as in the control of insects. There is no estimated per acre value available but in many parts of the country the part played by predatory species in the control of rodents is vital to the continuance of farming.

It is estimated that in the United States 400 million dollars is expended annually by hunters and a similar amount by fishermen in the pursuit of their sport. This huge expenditure clearly places wildlife management in the category of "big business". Very little of this trade is of direct and immediate benefit to the farmer. However, a considerable proportion of this money is expended in rural communities and, as such, plays a significant part in the economy of these communities. Thus, indirectly, these business values are of considerable importance to farmers.

Many millions of dollars are spent annually by state wildlife agencies from funds derived from hunting, fishing, and trapping licenses. In the State of Pennsylvania the game fund alone amounts to nearly 1½ million dollars annually.

There are at present approximately 7 million licensed hunters in the United States of which nearly one-tenth are in Pennsylvania and about 6 million licensed fishermen of which about 4 hundred thousand are in Pennsylvania. These two groups are not completely separate, but at a minimum, the sports of hunting and fishing furnish recreation for somewhere between 7 and 13 million people. Many of this number are not required to take out licenses, so it is probable that the total figure is nearer 13 million than 7 million. Since this group is largely confined to the adult population, predominantly men, it is probably true that about half of the able-bodied men in the country are participants in these sports. To this huge number must be added those people, who, through the mediums of hiking, camping, picnicking, etc., derive a considerable portion of their healthful recreation in the enjoyment of wildlife. How much this is worth is anybody's guess.

A contour hedge not only improves conditions for wildlife but because it is on the contour, aids materially in controlling erosion.

A rock outcrop planting illustrative of the many types of small areas on a farm that may be best devoted to plantings of shrubs and trees for conservation purposes.

On the basis of the various economic values connected with wildlife it is clear that wildlife management is seldom justified for the individual farmer on the basis of direct cash values. Even if other tangible values are included such as food obtained from game and business values, it is still doubtful if the average farmer can become very enthusiastic about expending time and money for wildlife benefits. It is thus clear that if wildlife management is confined to **game** management, the farmer will not ordinarily go very far out of his way to install recommended practices. However, if the farmer is encouraged to carry out wildlife management measures in order that he may reap the great variety of benefits which result from wildlife, his sincere attention can be attracted.

Insect and rodent control certainly warrant much consideration on the part of the farmer. If his problems of artificial control can be lessened by biological controls, this means a saving to him of both time and money. It is also essential for every farmer to appreciate the **conservation** benefits that come with proper land management for wildlife. In addition to this, it is highly desirable that he participate in the social and business values although this may not be essential to attaining his interest.

The question of whether or not a farmer can afford to manage wildlife might better be stated this way: Can the farmer afford **not** to manage his farm in such a way as to benefit wildlife? Here is the real key to the problem of farm wildlife management. The practices that are of benefit to wildlife must be important, first, to the welfare of the farmer and his farm. Their wildlife values are of secondary priority in importance. If any given practice is going to improve a man's farm, either from the standpoint of increasing his income or of preserving his capital assets such as the soil, then it is obvious that the farmer is going to be interested. Fortunately, most of the vital wildlife management measures can fit into such a scheme.

Wildlife as a part of good land use needs to be emphasized in farm management. Conservation of the natural resources of each farm is necessary to support the present and future generations. Good land use includes a moral obligation to preserve, not destroy. In the long run it is good business to conserve the basic capital resources of the farm.

To do this, each acre should be devoted to its proper use. Land should not be used with an intensity greater than it can stand and still continue to be productive. If each part of the farm is devoted to a use to which it is physically adapted, a good balance between land cover types will usually result.

The question of what the farmer can afford to do is usually tied in closely with the utility of any farm practice. However, instead of merely asking himself whether he can afford to do something, each farmer ought to ask himself whether he can afford not to do it. If he asks himself the question this way, he often finds out that he **can** afford to do it.

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There Ain't No Justice

By Geo. Gazdik, Jr.

"The largest part of those yellow devils caught up with me and left their trade-mark!"

IT was an afternoon in August, quite a few years ago. I was wearing knee action pants, now they call them knickers, when I bought my first .22 rifle which I had admired so long in the show case of a local hardware store. This was my first experience with a time payment plan, with the merchant holding the gun until I brought in the last payment. It required a lot of bookkeeping on the part of the merchant to take care of the small amounts which he credited to my account but now after all of the agony and suspense the gun was mine. Daniel Boone had nothing on me when I sauntered home on the run with a box of bullets, as we called them, in my pocket and that treasured gun glued under my right arm. Bring on your bears.

We lived quite aways from town but I made it home in exactly nothing flat, with old Shep our utility canine waiting impatiently for me at the gate, wagging his approval in a language we both understood. At last I was a mighty hunter and I am positive this was the happiest moment in my life. (I hope my wife doesn't read this.)

Out in the back yard away from prying eyes, Shep and I examined the gun, worked the pump action, admired the varnished stock and squinted thru the open sights. No more imaginary muskets for me. I had an honest to goodness he man repeater. Now we could go hunting for real game and forthwith we started to try our skill.

Shep led the way to the adjacent valley while I tagged along slowly, filling the magazine of the rifle. Now was the time to be prepared, no telling what awaited us around the bend. Shep's bark awakened me from a trance. Yes he had something started and the something turned out to be a large woodchuck which disappeared into an old stone fence. In went the chuck and out come the dog trailing an army of angry yellow jackets in his wake. Of course Shep came back to his master but why did he bring that swarm of dynamite along with him. Certainly I had a gun but how was I to use it with the speed I was making on the way home. The largest part of these yellow devils caught up with me and left their trade mark, also ruining a good hunting trip; but revenge is sweet and Shep and I went back that night with a can of kerosene and squared the score.

This rifle has accounted for many English sparrows, rabbits, woodchucks and so on and it still takes a count but on the other hand it has a new barrel. The original barrel and another following turned into boom-a-rangs from poor cleaning and would forget to shoot *there*, but would travel the landscape in search of something to hit that I wasn't even looking at. I still cherish that little rifle even if it is outclassed by quite a few larger brothers in the gun cabinet.

After I graduated from high school and went away to procure a higher education the gun and I drifted apart for a few years. Getting married, acquiring a family and working in the city we just didn't get back together again until about seven years ago.

When I finally returned to my own [Potter County] "The Hunters Paradise", in northern Pennsylvania, I acquired a 12 gauge pump and promptly started out as soon as the season opened to decrease the small game population. Even by the law of averages I was behind on what was considered the limit and the lady of the house just couldn't understand why so and so and what's his name came in with the bag limit while I most generally returned with one lousy squirrel or possibly a rabbit. I concocted all kinds of excuses but way down in my heart I didn't feel so good myself.

Small game season was nearly over and deer season was coming. What to do. Should I try it? I bought a red wool coat and cap, so the other guy would have a better target to shoot at. I bought and borrowed the rest of the trimmings and was talked into a 30-40 Krag which I purchased along with a shell belt that held at least 36 cartridges. Just another Daniel Boone or David Crocket. I'd show those deer in the morning.

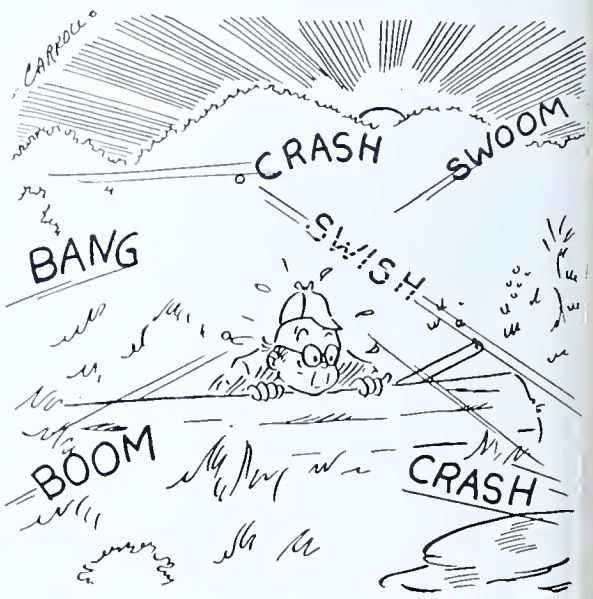
I didn't sleep very much that night and a cold morning came before I closed my eyes; but what of it, I was going deer hunting and no fooling. All arrangements had been made and the four of us started, long before daybreak. My brother and the other two fellows knew all the ropes of deer hunting, so they told me. Thru the dark we followed the old dug road, around the hill, up a valley, over down timber to get to the top of old Elephant Back Mountain in Tioga County. We were to take a watch on the deer runways and when a deer came by just pull the trigger and get out your knife. Very simple, at least that was the impression they gave me. So far so good; I had all of the requirements, all I wanted was a shot, yes just one shot.

I picked out a log, which froze to my outside lap. This was to be my watch, while the rest of the gang spread out along different runways. The wind went thru my clothes just as if I belonged to a nudist colony. I should have brought a heating stove along.

With the first streaks of dawn the barrage of assorted gun fire opened up. No man's land never sounded like this. It seemed to me that all of Pennsylvania and part of New York state were all in that vicinity, just blazing away. What they were shooting at, I couldn't say, but it certainly sounded like deer country.

I was tense, would one come my way? I strained my eyes, my ears were out a yard with all the listening I did. My luck held out and I never saw a flag. Well anyway the rest of the gang had the same luck that first morning. In the afternoon we moved over on another ridge where the hunting was to be better. They had me playing dog part of the time and then I'd watch and still I didn't see any horns. Yes we saw a lot of deer signs and tracks, but you can't shoot tracks.

About 4 in the afternoon my brother connected with an eight point buck and a little later on another one of our party brought down a four point. That night I had the



"With the first streaks of dawn the barrage of assorted gunfire opened up."

"I took two hasty shots at grandad, never touching a hair."

pleasure of helping the lucky ones drag their deer about three miles to the car.

The next morning found us at the same old stamping ground, I'd surely get my buck today, as two of the gang that had already filled their quota were going to do the driving and two of us were going to watch. I picked out a nice high stump on the hillside; at least I had wonderful scenery. Our two drivers put on a barking, yelling drive and worked harder than any two dogs. I heard a noise to my right and there they came. I counted them, six does, flags flying high, no buck.

On the second drive the other watcher grounded a four point and I was still an orphan. Yes I saw a few more flags on that drive but no hat racks. We cleaned the buck and hung him up in a tree and now by the process of elimination three drivers were going to chase all the deer in the county into my battle ground.

So far I had not fired a shot and I was even wondering how that cannon sounded. What do you mean target it in? Didn't the guy that I bought it from tell me that all I had to do was to draw a bead and pull the trigger.

Late that afternoon another drive was started and my watch was in a little clearing with fourth or fifth growth all around. I heard running feet, I shook like a leaf when out popped, one doe, one small buck and one small buck's great grandad behind, carrying a rack of horns that looked like a combination clothes tree and hat rack. I took two hasty shots at old grandad, never touching a hair. I couldn't figure it out—I remember the sights were on that buck when I yanked the trigger so I went over to the runway to investigate and if possible to spot the shots. Sure enough I helped the state with some of their improvement cutting by slicing off a couple of trees and both shots too high.

We did a lot of hard hunting for the balance of the week and saw a lot of does but when I checked in at home after that trip I was still short one buck. My wife said plenty.

Early in the spring I took out the old Krag and tried to target it in at 200 yards but the four foot target I was using proved to be too small because I couldn't hit it from rest position so I moved up a 100 yards and still one shot would go high, the next low with the next ones right and left, just another boom-a-rang barrel that wouldn't take a zero. The rifling was completely shot out. That cured me, I'd have a real rifle next season.

The Krag and I separated. I pity the guy that I sold it to but let him learn his own lesson, I had to. When I bought another deer gun it would have to at least shoot within the same county that I was pointing at.

I read all the magazines that I could get hold of. My mail was heavy for awhile with all the letters, catalogs and price lists. I tried to get a lot of things thru my nut, such as trajectory, ballistics, velocity and pressures. The sighting proposition was as bad with elevation, windage, half minute clicks this and peep that. Six o'clock hold. Woe is me. I never realized just what shooting embraced.

Uncle Sam and I got acquainted and I procured one of his 1917 Enfields and what a specimen that turned out to be, with its winged sights and pot belly and enough wood for a gun and a couple axe handles left over. All this gun lacked was a couple of wheels.

Promptly repacking the rifle I shipped it first to a gunsmith in the south to have the swelling reduced in the magazine and the rear battle sight removed and reblued. The gun returned and I sent it away on another face lifting operation. The second gunsmith took two inches off the barrel and affixed a hooded ramp sight. Why didn't I have all of this work done at one time? Well first my wife wanted a dress and then there was something the matter with the car and so on. The gun took another vacation and came back with a new micrometer rear sight. The bolt was changed to cock on opening, was chromium plated and engine turned, while the trigger was cut down to a three and a half pound pull. I purchased an inletted French walnut stock in the rough and went to work on this part and from my efforts on finishing, oiling and checkering I managed to dress the gun up in quite a presentable stock.

When the gun was finished I took it out in the country to do some shooting. First I tried wartime loads and they gave me three inches at a 100 yards. Next I tried different commercial loads. Two makes gave me two inch circles and one load gave me an inch and a half group with all these shots in strings of five from bench using muzzle and elbow rest. I had arrived at last. I had a gun that would drive nails.

Crows and woodchucks by the score succumbed to this rifle and I shot it from all positions and some I devised myself. Just wait until deer season rolled around again. I'd give them the works. I even bought my hunting license early and received number six. The state might sell out and I wouldn't be able to hunt.

After what seemed a century, deer season opened up and found the same four of us on the runways before daylight. There was plenty of blasting around us as soon as it became light enough to see. We did a lot of hunting that day but luck was against us and we never spotted a horn.

About the middle of the week two of our party finally ran down their bucks. I helped to drag those in too. Along the latter part of the week I took shelter in a small depression behind a large log, out of the wind on the south side of the hill with a good view of a clearing below me. I sat there for quite awhile. A movement in the scrub oaks to the left of the clearing attracted my attention. This movement turned out to be a buck and he certainly looked like a hunter's dream come true.

The way the buck was screened by the scrub oaks his head looked legal. Pennsylvania game laws consider a legal buck a male deer with two or more points to one antler. No mistake about it, here was my buck. The wind was in my favor, my heart was pounding like a model T Ford and I shook worse than a Hula dancer but nevertheless I assumed a shooting position that wasn't in the books but put me in the mind of a dog on a frosty night. Windage, elevation and all the rest of the sight problems raced thru my mind as I aligned the gold bead on the buck's front shoulder. Six o'clock hold and trigger squeeze. Yes I thought of all the fine points and just as I was ready to give the trigger the last touch, the buck made a jump and landed in the clearing and there he was—two beautiful spikes about a foot long and as bare of points as a soap box orator's speech. Can you blame me when I say, "There Ain't No Justice".

"There Ain't no Justice."

Causes of Juvenile Mortality

By Pierce E. Randall*

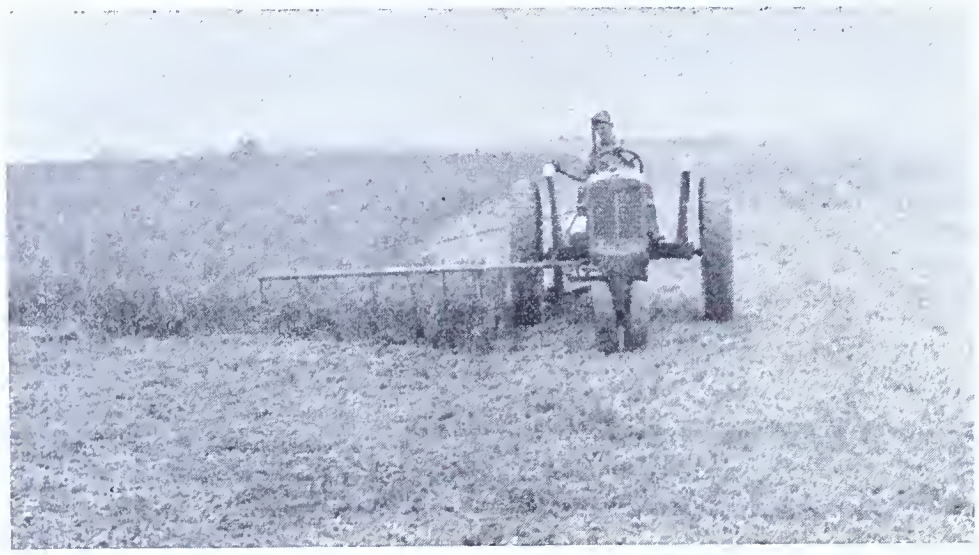


Figure 1.—Flushing bar on tractor-mower.

DURING the course of the management study of the ringneck pheasant *(Phasianus colchicus torquatus)* in Pennsylvania, considerable attention was devoted to the determination of the causes and extent of juvenile mortality. It was desirable to know if any agency or group of agencies was causing extensive losses among the young birds. If such a condition were discovered, corrective measures might be devised. Any reduction in juvenile mortality would greatly increase both the productivity and the surplus for hunting of the pheasant population.

Juvenile mortality has been one of the most difficult phases of a life history study to measure quantitatively. It has usually been worked out by determining the number of young birds hatched on an area and the number that reached maturity; the difference between these figures has been attributed to juvenile mortality.

This study was conducted on a 1,675-acre sample tract in Lehigh County. The study area was considered typical of the first-class pheasant range. This model unit of range was situated on some of the most productive agricultural land in the State.

The study was carried on under the direction of Dr. Logan J. Bennett, Biologist, U. S. Bureau of Biological Survey, and Dr. P. F. English, Associate Professor of Wildlife Management, Department of Zoology and Entomology, The Pennsylvania State College.

The 1939 breeding-season population of the pheasant study area consisted of 177 hens and 27 cocks, a density of 1 bird to 8 acres. Hen mortality during the nesting season reduced the females to 154 by July 15. Eighty successful nests, averaging 10.8 eggs in a clutch, occurred on the study area. Infertility of eggs and failure of some chicks to get out of the shell resulted in 10 percent loss of eggs in successful nests; thus 9.7 chicks in a clutch were hatched. The number of broods hatched, multiplied by the number of young hatched in a brood, gave the number of young pheasants produced on the study area, or 776.

Brood counts were taken throughout the summer to determine juvenile survival. When the birds were small, much care had to be taken to insure counting all the birds in a flock. One or two birds would often hide in the vegetation while the remainder of the covey flew or ran away. When the writer "cheeped" in the manner of a young pheasant, the stragglers of a flock usually answered and revealed their location.

The average number of young birds in a brood reaching maturity was determined to be 8.5 on the study tract. (See table 1.)

TABLE 1.—Size of broods at various ages

Age	Number broods	Average in brood
On hatching date		9.7
1/3 weeks old	73	9.1
4/5 weeks old	67	8.7
6/7 weeks old	68	8.7
8 weeks or older	104	8.5

Multiplication of this figure by the number of broods resident on the area gave a total of 680 young birds that reached maturity.

The difference between the 776 pheasants hatched on the area and the 680 that matured was 96, the juvenile mortality. The 96 birds lost from the broods represented 12.4 percent of the young pheasants produced on the area. Studies in Michigan also revealed a comparatively small juvenile mortality in first-class pheasant range. Wight (English, 1933) found the loss of young to be 17.7 percent for 1929 and 17 percent for 1930. English (1933) estimated an average loss of 20 percent of the original birds during 1932 and 1933.

An examination of the brood-count data presented in table 1 revealed that the largest loss of young birds occurred within the first 3 weeks after hatching. This was not unexpected, for the young were subject to more and greater hazards while small.

Two methods were used in the attempt to determine the factors causing juvenile mortality in pheasants and the relative importance of each factor. During the fieldwork the remains of young pheasants—usually killed in accidents but occasionally by predators or weather—were sometimes found.

As a supplement to direct field observations of mortality, studies of the spring and summer food habits of the resident predatory species were conducted. By combining these methods, the loss of 64 birds, two-thirds of the juvenile mortality, was explained.

Accidents, including mowing, harvesting, automobiles, flying into obstructions, and falling into depressions, were responsible for the death of 28 young birds or 29.2 percent of the total losses. (See table 2.) Predators destroyed 33 birds or 34.4 percent of the juvenile mortality. Three birds, representing 3.1 percent of the total, were drowned.

Hay-mowing operations were the largest single known cause of mortality. On the study area 18 young pheasants were killed and several more were injured by mowing machines. On June 6, 1939, a tractor mower struck a hen and her brood of 12 day-old chicks in a dense stand of alfalfa. The hen and eight of her offspring lost their lives before the tractor was stopped. Had a flushing bar been in use on the tractor (figure 1), it would probably have saved the life of the mother and chicks.

Two young pheasants were victims of the wheat harvest. One bird, about 2 weeks old, was run over by the wheel of a tractor drawing a combine. Another pheasant, possibly 4 weeks old, was killed by a grain-binder. Harvesting was considerably less destructive to pheasants than haying.

During the summer four immature pheasants were killed by automobiles on the roads of the study area. This loss was relatively small, probably because no high-speed thoroughfares pass through the study tract. On main traffic arteries a large number of inexperienced young birds were killed during the late summer and early fall.

Flight accidents are not uncommon among game birds. During the past summer two nearly full-grown pheasants were killed on the study tract by flying into obstructions.

TABLE 2.—Causes of juvenile mortality

Cause of mortality	Number lost	Percent of total lost	Percent of total juvenile population
Accidents			
Mowing	18	18.8	2.4
Harvesting	2	2.1	0.3
Automobiles	4	4.2	0.5
Flight accidents	2	2.1	0.3
Falling into depressions	2	2.1	0.3
Predators			
Cooper's hawk	10	10.4	1.3
Marsh hawk	9	9.4	1.2
Unknown raptors	5	5.2	0.6
Crow	1	1.0	0.1
Dog	5	5.2	0.6
Cat	1	1.0	0.1
Weasel or mink (?)	2	2.1	0.3
Weather			
Drowning	3	3.1	0.4
Total known mortality	64	66.7	8.4
Unknown mortality	32	33.3	4.1
Grand Total	96	100.0	12.5

One bird struck the side of a house; the other flew against a white refrigerator car

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of the Ringneck Pheasant

standing on a railroad siding. Stoddard (1931) stated that bobwhite quail seemed unable to distinguish between a white wall and the sky and often flew against white buildings. Although spectacular, this was probably not an important cause of mortality among pheasants.

Two farm boys found a dead pheasant, less than a week old, in a post-hole along a fencerow. The chick had apparently fallen into the hole and been unable to extricate itself. On another occasion a farmer on the study tract found the body of a week-old pheasant that had fallen into a shallow ditch and drowned. King (1937) considered falling into depressions from which they could not extricate themselves a very serious source of mortality in ruffed grouse *(Bonasa umbellus umbellus)* during the first few weeks of their lives. This was probably a much less important cause of mortality with pheasants than with grouse, as the farmlands ranged by the pheasant broods contained few such pitfalls.

The marsh hawk *(Circus hudsonius)* was the most common large hawk on the study tract and throughout much of the pheasant range. For this reason, a careful study of the spring and summer food habits of this bird was made. Regurgitated pellets containing indigestible remains of prey were collected weekly from the hawk roosts, and the contents were analyzed. In addition to this, three young marsh hawks were tethered at the nest and held captive for more than a month. The adults continued to feed their offspring during this captivity. The nest was visited daily, the gullets of the young hawks were emptied by squeezing, and the contents were analyzed. After the gullets were robbed, the hawks were sometimes force-fed natural foods so that they might not suffer from a lack of the proper nourishment.

Figure 3.—This partly grown ringneck pheasant was killed by a dog.

Remains of seven young ringneck pheasants were found in the summer pellets of adult hawks, and two juvenile pheasants were fed to the nestling hawks by their parents. This was only 1.1 percent of the marsh hawks' food. These nine pheasants represented 1.2 percent of the juvenile population on the study area and 9.4 percent of the juvenile loss. The unimportance of marsh hawks as predators of juvenile pheasants was of particular interest because of the high pheasant population maintained on the study area. The study tract supported a fall pheasant density of about 1 bird to 2 acres. After studying the pressure exerted by marsh hawks on young pheasants, Errington and Hamerstrom (1937) stated that in Iowa pheasant broods in areas heavily hunted by marsh hawks shrank in size at the same rate as did broods in areas where these hawks were rare. There seemed to be no perceptible connection between the conspicuous preying of local marsh hawks and the seasonal shrinkage in the size of pheasant broods.

The Cooper's hawk *(Accipiter cooperi)* was held responsible for the death of 10 young pheasants or 10.4 percent of the juvenile mortality. Several other pheasants may have been victims of this hawk. Pheasants, both young and old, were afraid of Cooper's hawks. This was in marked contrast to marsh hawks, of which adult pheasants showed little fear. When a pheasant had been killed by a Cooper's hawk in a certain covert, other pheasants would not be found in that vicinity for several days.

Good cover, such as weedy grain stubblefields, cornfields, fencerows, and ungrazed woodlots, where immature pheasants can feed, loaf, and roost in concealment, is the best protection against Cooper's hawks (figure 2).

A crow was observed seizing a week-old pheasant from a brood that was being led by the hen from a new-mown hayfield. This, however, was probably an unusual source of juvenile mortality.

Stray dogs were the worst known mammalian enemy of young pheasants. At least five young birds on the study area were victims of these animals. One stray dog killed four young pheasants during late July. Most farm dogs do little damage to wildlife and seldom range far from the farmyard except in the company of their owners. A few dogs, allowed to roam freely or turned out to shift entirely for themselves, can and will do considerable damage to wildlife, including pheasants (figure 3).

Occasionally feral cats will kill juvenile pheasants. Twice during the course of the fieldwork cats were observed as they were feeding on pheasant kills that appeared to be fresh. Both pheasants were immature birds. The writer observed a house cat trying to catch an adult female pheasant. The cat stalked the bird and sprang for it, but the hen either saw or heard her attacker in time to escape.

Skunks *(Mephitis nigra)* were very numerous on the pheasant study area. The breed-

(Continued on Page 28)

Figure 2.—Good cover: an excellent safeguard against high juvenile mortality.

PENNSYLVANIA » » Historical »

By James N. Morton
and
Leo A. Luttringer, Jr.

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Photos courtesy State Dept. of Commerce.
The State Capitol, Harrisburg.

WHAT do Pennsylvanians know about her historic shrines, her scenic beauty and her wonderful and varied recreational facilities? What blinds people to the beautiful and interesting things around them and sends them hither and yon, even to other lands, to see 'wonders' which many times do not excel—yes do not even measure up to—those of their homeland?

The most beautiful spots in the world can be found in Pennsylvania. From mountain to lake shore one can find a wide variety of attractive places in which to employ his leisure time. Many of our early settlers appreciated these facts and made their homes here in the Keystone State.

Here it was that Ole Bull, famous Norwegian violinist, established, in 1852, his Utopia in Potter County; and to this day, as one motors down the Coudersport Pike, one passes the Hamlet of Oleona and glimpses the remains of the old castle, which overlooks Kettle Creek and its rocky glens. Approximately 800 settlers here found "a new Norway, consecrated to liberty, baptized with independence, and protected by the Union's mighty flag".

To Pennsylvania also came refugees of the French Revolution who set up on the banks of the Susquehanna, between Wilkes-Barre and Towanda, the French town of Asylum which was intended as a haven of refuge for these people, and which was visited by Louis Philippe, King of France. It was intended that Marie Antoinette should find peace and quiet in these beautiful hills, but the Revolution decided otherwise.

Likewise, Russia, in the person of Prince Gallitzin, who gave up riches and title to live in the hills above Johnstown and Altoona. The Prince came upon a Bible, was converted and began theological studies in Baltimore. He founded a colony at Loretto, Cambria County, purchased over 20,000 acres which he divided into farms and offered to settlers on easy terms. He died there in 1841. In 1916 a marker was erected in his honor over a spring on the William Penn Highway, near Duncansville. Many other names could be given of famous people who at one time or another found peace and quiet among the hills of Pennsylvania.

As in the past, so now in the present Pennsylvania stands among the foremost states in the Union in offering to its citizens many advantages both for a livelihood and for recreation. It has not been until recently that public lands have been acquired for recreational use. The early English settlers were perhaps the first in establishing the public fishing waters and the "Commons" with which we are all familiar.

Today there is approximately one million and a half acres of publicly owned State Forest land. The use of these recreational areas has increased considerably in the last several years in direct contrast to the decrease in business activity, which has left man with more leisure time on his hands. State forest lands lie mainly in the north-central, central, and northeastern portions of the State. These holdings are full of a variety of spots that offer excellent recreational possibilities.

South of the Lincoln Highway in Franklin County is the James Buchanan State Forest Park, one of the most historical spots in the State Forests of Pennsylvania. Here the fifteenth President of the United States wandered as a boy with a turkey bell around his neck to keep him from getting lost.

Caledonia State Forest Park, situated on the Lincoln Highway between Chambersburg and Gettysburg is the most extensively used park in our forest system. The most picturesque is the George W. Child Park, Child's Park as it is commonly known, in Pike County. Here one will find waterfalls, lakes, and forests in abundance.

In order to see big timber as it originally stood on our hillsides, one must go to Snyder-Middleswarth Park in Snyder County near Troxelville where stand many virgin hemlocks, white pines, pitch pines, and hardwoods. To appreciate our mountains at their best one must go to Leonard Harrison State Forest Park near Wellsboro in Tioga County wherein the spectacular view of Pine Creek, winding its now roaring now placid way through a thousand foot gorge, reminds one of the Grand Canyon.

Other beautiful state forest parks are the Voneida in Centre County, and the Mont Alto park in Franklin County, adjoining which is the State Forest School, the oldest existing forest institution in America. One passes the Mont Alto Sanatorium enroute through the beautiful forest glades.

For those who care to use them, the Department of Forests and Waters has established many public camp sites of which there is usually one in each of the State Forests. In addition certain historical and unusual parts of the State Forests have been marked by monuments. Of these Bear Meadows, near Bellefonte, Centre County, is popular because of its unusual make-up and great botanical interests. The Joyce Kilmore State Forest Monument on Paddy's Mountain in Union County stands as a monument to the young American poet who was killed in the World War, and whose poem, "Trees", is so well known.

Few people are aware of the grandeur of Pennsylvania's mountains. Recent surveys show that Pennsylvania has many high elevations. In 25 of our 67 counties are really notable high points. In five counties there are elevations of 3,000 feet or more. The highest point in the State is on Negro Mountain in southern Somerset County where the elevation is 3240 feet. Many of these points are accesible, and there are numerous smaller, more inaccessible places which appeal to those who like that kind of recreation. Camping is permitted on State Forests, by permission, and cabin sites may be leased at certain areas. Information concerning this can be secured from the Department of Forests and Waters, Harrisburg.

A journey through Pennsylvania will not be complete without a visit to the State Parks, of which there are several. Among these is the Bushy Run State Park in Westmoreland County. Not far from Jeanette is the Bushy Run Battlefield, the scene of a decisive battle in August 1763 when Col.

Scenic and Recreational

Henry Boquet with a small force of Highlanders and Colonials was ambushed by Guyasuta and an overwhelming force of redskins. He routed the Indians by a clever ruse and the victory practically raised the seige of Fort Pitt, the blockhouse of which still stands as a testimony to the terrific struggle.

Then there is that memorable and historic site of Washington's first battle—Fort Necessity State Park, near Uniontown. Here on an expedition with 400 men he learned that 1600 French and Indians were advancing from Fort Duquesne to meet him. He put up entrenchments in Great Meadows and named his log stockade Fort Necessity. Washington later became owner of 300 acres in this area, including Fort Necessity. The reconstructed fort is on U. S. Route 40, the National Pike, 11 miles east of Uniontown.

Nationally known Valley Forge Park, aside from its historic shrines, holds another wonder—a natural wonder in the amazing beauty of its dogwood when in bloom. You may travel the ends of the earth before you see anything as lovely. The autumn coloring of the leaves is also extremely beautiful. The park comprises about 1600 acres along the Schuylkill River and embraces ground hallowed and consecrated by the privations and sufferings of the Continental soldiers during the terrible winter of 1777-1778.

Along the Delaware River is Washington Crossing Park, commemorating the exploit of General Washington and his soldiers in crossing the river on that stormy December night to capture the Hessians at Trenton. Lake Erie with its State Park on Presque Isle provides a very beautiful beach with many bathing and picnicing facilities. Also, like Cook Forest, it offers unlimited opportunities for the study of flora and fauna. On Presque Isle is also the Perry Monument and the blockhouse erected over General Anthony Wayne's grave.

Cook's Forest Association, with Tom Liggett a large tract of Indian land open to settlement in 1828. Because of the beauty and natural appeal of certain portions of this virgin wilderness, there was formed the Cook's Forest Association, with Tom Liggett as the motivating spirit, for the purpose of acquiring this particular portion as a State Park. In this area is now a portion of the original forests of Pennsylvania, mainly coniferous in character. Visitors the world over have visited this beautiful forest shrine.

Organized clubs, particularly, take advantage of the Park. Boy and Girl Scouts of America, Garden Clubs, Sunday Schools, High Schools, the Y. M. C. A., and other groups often throng its sylvan by-paths.

Though there are many beautiful sites in the Park that are closely situated to park areas and trails, there are also many wonderful spots far away from the beaten path, and deep in the forest. Here it is that the forest flowers bloom more thickly, and here the trees seem larger, the silence greater, and the wildlife more friendly.

Fort Washington Park in Montgomery County, near the Philadelphia County Line, is the site where the Continental army erected fortifications during the campaign in and around Philadelphia. A strip of the old Delaware Canal makes up Roosevelt Park where boating, canoeing, barge parties, swimming and skating combined with the forty miles of shaded roadway and the attractive scenery offers a recreational and beauty spot that attracts thousands each year.

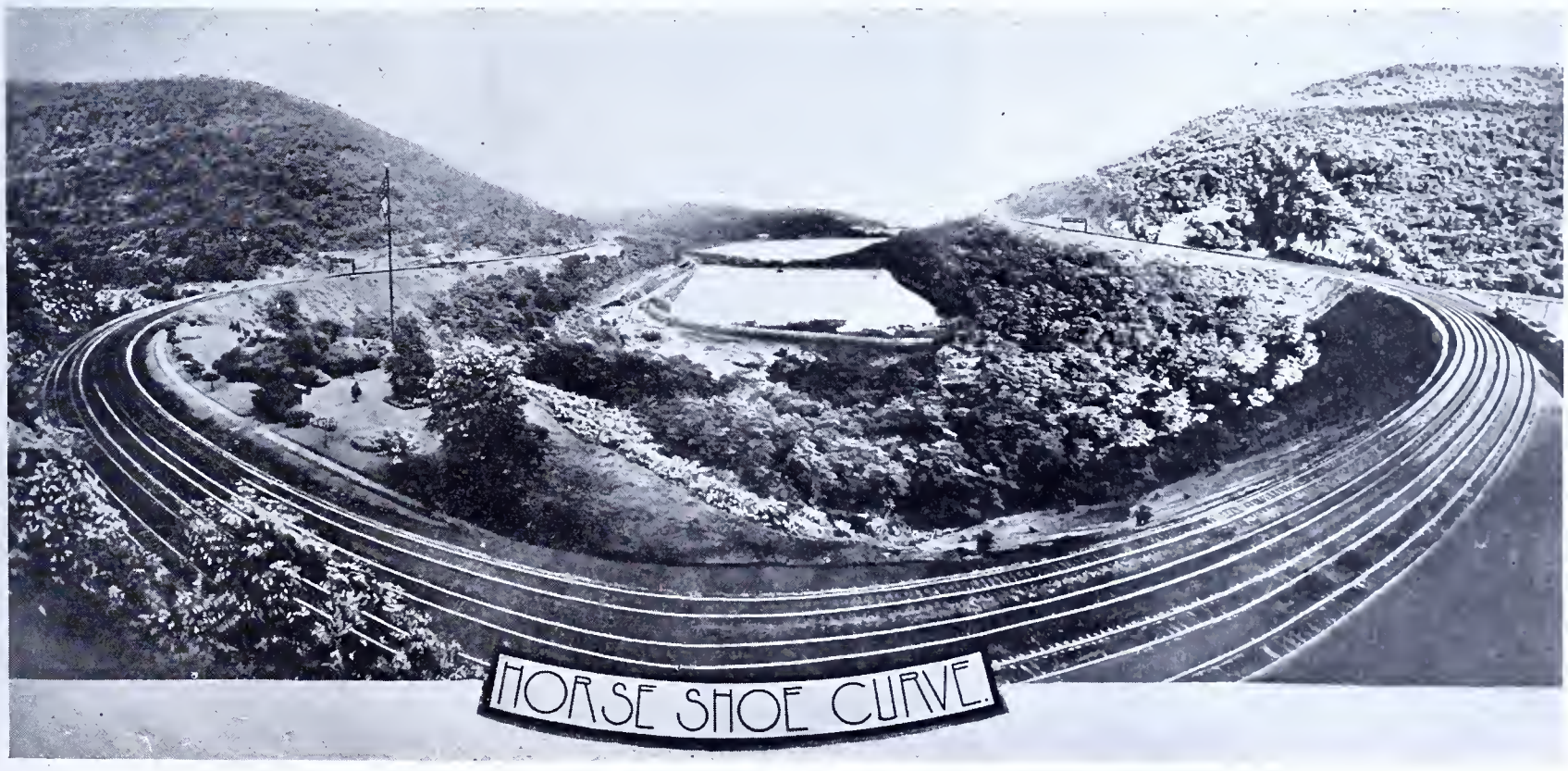
Pennsylvania Game Refuges are also scenically beautiful and provide many things of interest to the tourist. They are situated in all manner and types of forest and brush lands, among steep hills, rocky cliffs and delightful glens, where clear sparkling trout streams invite you to rest in the shade and silence of the woodland. To those persons interested in wildlife the Game Land Managers can relate many interesting tales of their experiences and stories of the habits and peculiarities of our wild creatures. These men live intimately with them year in and year out.

A list of a very few of the places where Game Land Managers' headquarters can be easily reached may provide the incentive for a visit. Others are equally as interesting, but space does not permit mention of all of them.

Game Refuge No. 501 on State Forest Land is located in Clinton County twelve miles south of Renovo, along the Renovo-Snowshoe State Highway. This is in the wildest, and until comparatively recent years, one of the most remote areas of the State. Only a few years ago Game Land Managers were compelled to carry all provisions during the winter on their backs and travel by snowshoes to Renovo. A good State highway now passes within a short distance of the headquarters.

Refuge No. 502 on State Forest Land has always proven of great interest to tourists. The house sets in the midst of the forest where deer daily come to the surrounding clearing to graze contentedly, unmindful of sightseers. A large recreational area has recently been developed near the refuge by the Department of Forests and Waters. This refuge is located in Clearfield County, ten miles northwest of Clearfield, along the Clearfield-Penfield Highway. One of the largest State forest tree nurseries in the State is located along the highway near the refuge.

(Turn Page)



The famous Horseshoe Curve above Altoona, and the three reservoirs which supply the city with water.

Friendly tourists getting acquainted in their overnight stop at Elliott State Forest Park, Penfield Highway, Clearfield County, Route 153.

The Game Land Manager at Refuge No. 508 on State Forest Land, in Lycoming County, eight miles east of Montoursville, along the Loyalsock Creek, is very much interested in snakes. Almost anytime, until the snakes hibernate, he has a collection on display and can give authoritative information concerning them.

Refuge No. 12 is located in Bradford County on a large area of State Game Lands five miles south of Leroy. A large natural lake lies a short distance from headquarters. This lake furnishes excellent fishing. A Civilian Conservation Corps Camp is now engaged in developing the Game Lands. A visit here will demonstrate the value of the C.C.C. Incidentally it was on these lands that the town of Barclay, a flourishing mining community, once stood. At one time the town prided itself on having three churches, several doctors, a railroad and skating rink, in addition to the coal mines, saw mill and residences. But now Barclay no longer exists. The buildings have disappeared, and only a few of the old foundations are to be seen. Barclay is returning to its original state. Instead of people, its only inhabitants are wild animals and birds. Trees rise where houses once stood. The town is now but a memory. Each year former residents and friends return to the site of their old town for a picnic and to care for the cemetery where many of their loved ones lie buried.

Game Refuge No. 13 is located in Sullivan County, eight miles north of Benton. Here also can be seen work which was done by a Civilian Conservation Corps Camp which has been removed from the State Game Lands. Sullivan Falls on the Game Lands, is an attractive waterfall in the midst of a forest of large beech, birch and maple trees. It is only a short distance to Ricketts Glen and the Falls along Kitchen Creek, which have always been alluring to those who have been in that section. North of the Game Lands near Laporte is the site of Celestia, or what is known to some of the residents of the mountain region, as "God's Country". Peter Armstrong, a member of the Seventh Day Adventist Church, possessed a religious belief which was as sturdy as his iron-like body. He and his loyal wife left Philadelphia in 1845 and weeks later, with their cows, horses, oxen and sheep, settled on a small tract of land near Laporte. More land was added from time to time until in 1864 the Armstrongs owned four square miles of territory. They were joined by others of the same religious belief, and homes were erected, areas cleared for cultivation and for grazing cattle.

In 1864 Mr. Armstrong made a deed which in later years caused his home to be known as God's House and his land as the Kingdom of God. The deed in which Mrs. Armstrong joined with her husband was dated June 14, 1864, and made to "Almighty God." It is considered a masterpiece in technical and spiritual beauty. The consideration was "the kind, protecting care of Almighty God in the past and present, which we do hereby acknowledge, and for the exceeding great and precious promise of unending life of those who in holy faith and patience wait for the coming of His anointed Son to judge the world."

Peter Armstrong had a firm belief that God would reappear on the earth and establish His Kingdom on their land. Celestia was to be the name of the town in God's country, and its ruins remain to claim attention of visitors to Laporte and the nearby Eaglesmere, which is famed as a summer resort and attracts thousands of visitors annually. Garbage from the hotels is dumped a mile or so from the resort and here at dusk wild bears are often seen feeding on choice tid-bits.

Game Refuge No. 26 on State Game Lands, is located in Blair, Cambria and Bedford Counties, ten miles southeast of Portage. Practically all native species of wildlife in the State are found in this section. Incidentally it is on these lands that the monument to the memory of the lost Cox children stands. Although this tragedy of the mountains occurred almost eighty years ago, yet the natives in that section still keep alive the story of the two little sons of Samuel and Susanna Cox, who became lost in the thick woods near their mountain cabin home. People for miles came to assist in the search until there were five hundred people searching in groups of fifty each. The search continued for fourteen days.

One of the mountain residents by the name of Dibert was sick and could not assist in the search. He dreamed about the lost boys, but thought nothing of it since it was all that was talked of. He dreamed that same dream on three successive nights. Although he was not of a superstitious nature, yet he became alarmed by the repetition. He related the dream to his brother-in-law, which was as follows: "By passing a certain point in the mountain a dead deer would be found, next a little shoe, a little farther on a small beech

Photo by W. J. Kitchen

Black Bear snapped crossing road in Clinton County.

tree had fallen over Bobs Creek over which the children had passed; a little farther on an old birch tree stood and close by was a hemlock in a deep ravine by Sayn Run, and here the children would be discovered." Everything was found as revealed to Mr. Dibert in his dream. When searchers arrived at Sayn Run they found the boys lying at the foot of the hemlock tree—dead. Fifty years later the monument was erected to their memory, and each year many people make a pilgrimage to the spot.

Game Refuge No. 29 on State Game Lands, is located in Warren County, three miles west of Clarendon. The Game Lands are surrounded by many thousands of acres of forest land included within the Allegheny National Forest. In Warren County is also located the Cornplanter Indian Reservation. Cornplanter was a chief of the Six Nations from the Revolution to his death in 1936. Many people associate Indian Reservations with Oklahoma and New Mexico and do not know that Pennsylvania also has one. It comprises about 1,500 acres and is located fifteen miles northeast of Warren.

Game Refuge No. 33 on State Game Lands, is located in Centre County, two miles south of Phillipsburg. Deer are plentiful in this section. Near the Game Land Manager's Headquarters, on the four mile stretch of State Highway between Phillipsburg and Tyrone, three hundred and eight deer were killed by automobiles in less than four years after the road was improved. The situation made necessary the erection of signs by the State Department of Highways, warning motorists of the danger from deer crossing the highway.

Game Refuge No. 51 is located in Fayette County, on State Game Lands near Dunbar. In addition to the Game Refuge, this territory is rich in things of historical interest. Included among others is Fort Necessity, the scene of Washington's first defeat, and only surrender; the Great Meadows and Christopher Gist Plantation, both of historical interest in connection with the French and Indian Wars, the site of General Braddock's crushing defeat at the hands of the French and Indians who assailed Braddock's troops from ambush and killed them like cattle in a corral. General Braddock had four horses shot from under him, and while mounting the fifth received the fatal shot which resulted in his death four days later at Fort Necessity.

Game Refuge No. 54 on State Game Lands, is located in Jefferson and Elk Counties, five miles northwest of Brockway. In addition to the Game Land Manager's Headquarters, this is also the location of the buildings comprising the Game Protectors' Training School. In 1931 the school was established, and is now used for training all field employees before they assume their duties. Each summer salaried field employees spend a period at the school in a refresher course, where they receive practical classroom work to assist them in their field duties. A Civilian Conservation Corps Camp is located eight miles from the Training School on Game Lands.

Pennsylvania's Migratory Wild Waterfowl and Upland Game Refuge located in Crawford County, near Linesville, attracts thousands of visitors annually. It forms the head of the famous Pymatuning Dam, the largest artificial lake in area in the State, comprising about 16,000 acres. The lake has a shore line of 70 miles, and a capacity of over 64,000,000,000 gallons. The Refuge contains approximately 2,500 acres of water area and 1,170 acres of land and marsh, or a total of 3,670 acres.

Photo Dept. of Highways

Falls in Childs State Park.

Of particular interest is the Pymatuning Museum constructed and maintained by the Pennsylvania Game Commission for the display of mounted specimens of wild waterfowl, shore and other bird life. Its purpose is to give sportsmen, naturalists, and others interested in wildlife an opportunity to become better acquainted with our valuable waterfowl.

The museum was completed and opened to the public October 15, 1938. It now contains 8 land and 38 migratory and shore bird species with a total of 188 specimens, all of which were collected on the area.

Pennsylvania State Game Farms also attract many visitors. Thousands of beautiful ringneck pheasants and quail can be viewed at the Fisher State Game Farm near Schwenksville, Montgomery County, at the Jordan Game Farm near Harlansburg in Lawrence County, and at Loyalsock Farm in Lycoming County. The latter is beautifully situated with bubbling waters of the famous Loyalsock Creek winding past the farm buildings, in front of which is a beautiful and natural bathing beach. A wild turkey farm, situated deep in the mountains of Juniata County is well worth visiting but not so readily accessible. It can be reached via Mifflintown and Port Royal over Route 75.

The Department of Fisheries maintains many hatcheries, a visit to any one of which will prove an education in itself. Pool after pool harboring millions upon millions of beautiful trout of various sizes, is a sight to behold, and at feeding time when they rise in gleaming flashes to the food thrown to them by the keepers, one yearns for reel, rod, pipe and swift flowing mountain stream. Fish Hatcheries are located as follows: Pleasant Mt., Wayne Co., Corry, Erie Co., Union City, Erie Co., Tionesta, Forest Co., Reynolds Dale, Bedford Co., Huntzdale, Cumberland Co., Pleasant Gap, Centre Co. (Spring Creek Project included), and Torresdale, Philadelphia Co.

Most people associate commercial caves with Virginia and Kentucky, but Pennsylvania also has many of these interesting phenomena of nature.

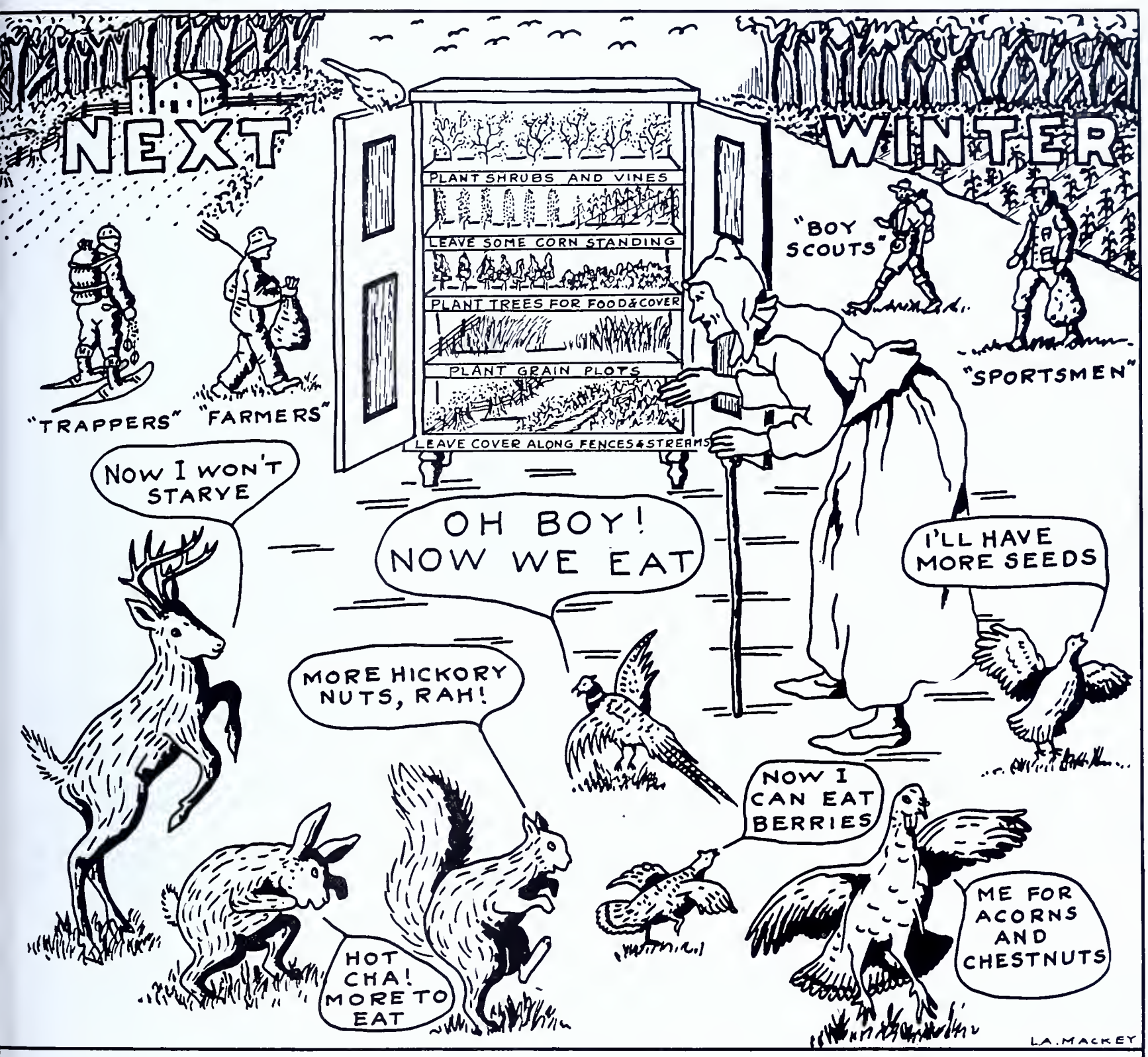
Crystal Cave, located in Berks County, five miles west of Kutztown and about twenty miles from Reading, has been operated since 1873. Alexander Caverns, located in Mifflin County, about nine miles north of Lewistown, and three and a half miles from Reedsville. Hipple Cave, located in Bedford County, twelve miles north of Everett, and about twenty-two miles south of Altoona. Historic Indian Cave, located in Northern Blair County, on Highway Route 45, at Franklinville. Indian Echo Cave, just off the William Penn Highway at Hummelstown, 10 miles east of Harrisburg. Lost Cave located in Northampton County, one half mile east of Hellertown. Onyx Cave in Northern Berks County, about seventeen miles north of Reading near Virginville. Penns Cave in Brush Valley, eastern Centre County four and a half miles from Centre Hall. (This is the only cave in the State through which visitors are taken only by boat, a ride of about one mile.) Seawra Cave, in Mifflin County, twelve miles from Lewistown near Alfarata. Veiled Lady Cave in Centre County, east of Centre Hall, and Woodward Cave also in Centre County at Woodward, on Highway Route 45 about twenty-five miles west of Lewisburg.

These are just a few of the historical, scenic and recreational places in Pennsylvania that can be enjoyed by those of her citizens who are out-door minded. Be sure to include some of them on your vacation trip this year.

OLD MOTHER HUBBARD

OLD MOTHER HUBBARD WENT TO THE CUPBOARD
FOR WILDLIFE TO FIND SOME FEED;
BUT WHEN SHE GOT THERE THE CUPBOARD WAS BARE-
THEIR FRIENDS HAD PLANTED NO SEED!

ENT TO THE CUPBOARD



SAID OLD MOTHER HUBBARD, LEAVING THE CUPBOARD,
THIS SHALL NOT OCCUR AGAIN;
FOR ALL WILDLIFE'S FRIENDS SHALL MAKE AMENDS
THROUGH PLANTING SHRUBS AND GRAIN

CURRENT TOPICS

In Memoriam

By Ross L. Leffler

The members and employes of the Game Commission, and thousands of sportsmen throughout the Commonwealth, will be a long time recovering from the shock caused by the untimely death on May 4 of Judd C. Turner, Assistant Executive Director of the Commission. Hundreds of others will likewise deplore the passing of this lovable personality. He was a benefactor of many, and because of his amicable disposition and his unusual ability to understand people, he won an everlasting place in their affection and esteem. Striking evidence of these humanitarian qualities came to light in the eulogy presented during the funeral services held at his home Church in Ellwood City. Therein was emphasized his love for young people, for the poor and the oppressed, his civic pride and devotion to duty, and a multitude of other attributes. Notwithstanding the aching void in the hearts of his bereaved wife, daughter, and friends, the Commission and its entire staff will long remember his ever vigilant helpfulness, his cheery smile and ready wit.

Mr. Turner was born at Sandy Lake, Mercer County, October 5, 1879. In his youth he was widely known as a baseball player throughout Pennsylvania. For many years he was engaged in the steel industry, having been employed in various capacities by the National Tube Company, the Standard Engineering Company, and the Etna Engineering Company. He held an important executive position with the latter company at Ellwood City for a number of years prior to coming to Harrisburg.

He was long active in civic affairs in western Pennsylvania, having served as a member of the Lawrence County Executive Committee, Boy Scouts of America, President of the Northwest Division of the Pennsylvania Federation of Sportsmen's Clubs, and in numerous other capacities.

He was a member of the Presbyterian Church; the Ellwood Lodge 599, Free and Accepted Masons; Pennsylvania Consistory, 32nd degree, Zem Zem Temple Shrine, Erie; the B. P. O. E. No. 1356, Ellwood City; an Honorary Member of the American Legion; and numerous other organizations.

Funeral services were held in the First Presbyterian Church, Ellwood City, burial taking place in the family plot in the nearby Wurtemburg Cemetery. Field Division Supervisors of the Commission in full uniform acted as pallbearers, with members of the Commission and its staff, and other long-time associates and acquaintances, acting as honorary pallbearers. Last rites were administered by members of his Masonic fraternity.

JUDD C. TURNER

Would that we could be like you,
Always cheerful, pleasant, true.
Your life too full of helpful service,
To find place for complaint or malice.
With unselfish devotion your tasks pursued,
Calm, patient, with strange powers endued,
Who ever keenly and sympathetically knew
The trials that beset we humans so.
Long after material things have gone,
Such sterling traits in man live on.

—Chas. F. Stambaugh.

The Outdoor Writers' Association of America in their session at the National Wildlife Federation Meeting in Washington, D. C., March 18, urged more practical application of the research work done by fish and game commissions of the country . . . the research already in the files, rather than to carry on endless research for new species and projects of remote possibilities. "Too much of our research ends with publication and not with application" they said. "Too much research ends in the files in an office. We need to find out what the research men and the scientists have found out, and then try to do something with it, to improve hunting and fishing opportunities."

They urged an educational program to teach the youth of the land *conservation in schools* as well as art and music, which are already taught. Conservation means better land use, more food and recreation. You can't eat art and music and you can't hunt it. The sportsmen who are paying the bill with their license money are expecting better hunting and fishing, under proper restrictions.

John M. Phillips, former president of the Pennsylvania Game Commission, in an interview, urged practical educational activities for the youth of high school age, both in town and country. You can't teach an old dog new tricks and we must depend upon the understanding of the American youth to carry on in conservation. We must teach them *how*. We can't depend on the older sportsmen to complete the program for them. It is also necessary to *teach the teachers and instruct the instructors*, not by fanciful theory, but by practical application of game management on the ground, John Phillips stated. He urged use of the Boy Scout manual as a type of text book. One Boy Scout in a community or in a ward will leaven the whole gang of boys and girls in the neighborhood. "The Scout is a far-reaching influence for good in behalf of any outdoor conservation program, because he understands the out-of-doors and knows what it is all about," he said.

AN HONEST CONFESSION

"I was rather incensed at your asking for a report of my game kill. I was ready to swear I sent it in on January 2, and had a receipt for same. However, an investigation of my hunting coat revealed the fact that it was still there. My apologies and thanks for reminding me of same."—Albert M. Romberger.

STOLEN—One Western Trap No. 8388 used for target shooting. Owned by the Swatara Rod and Gun Club. Please notify Joseph H. Mease, Deputy Game Protector, Jonestown, Pa., R.D. No. 2.

LOST—White female Greyhound with spot on left side of head. Last seen near State Line going towards Hammortan, Pa. Dog registered in Delaware March 3, 1940, but slipped her collar. Please notify Matthew Toomey, 1810 Lancaster Ave., Wilmington, Del.

After game protectors discovered the front and hind quarters of a large buck on a surprise visit to his home on Saturday afternoon, a West Fairfield Township, Westmoreland County, man is said to have admitted he killed the deer and four others since January 1.

The self acknowledged offender was arrainged before a Ligonier justice, who imposed a $106 fine. Unable to pay the fine, the prisoner was committed to the Westmoreland county jail for 106 days.

A more severe penalty is made optional by the law, but leniency was shown because of the moderate circumstances of the defendant.

As evidence that an owl can see pretty well by daylight, the National Park Service cites the instance of a horned owl spotting a ground squirrel 100 yards away at nine in the morning.

CURRENT TOPICS

CHESTNUTS?

There are what might be called two schools of thought on the chestnut question here in Pennsylvania.

The one notes with glee that chestnut trees are coming back after having conquered the blight, and immediately hikes out into the woods to find a few. The other notes glumly that chestnut trees are not free of the blight, and figures that it will be only a matter of time before those bearing now will be dead and gone like their predecessors, after which local chestnuts will be completely forgotten.

Both these groups are wrong. Pennsylvania chestnuts have not conquered the blight. Nearly all forest trees, (most of them are actually shoots growing out of old stumps), are infected to some extent, but not quite enough to keep them from bearing. Eventually, though, the blight will get them.

In the meanwhile, however, some of the nuts will drop to the ground after the frosts crack open their prickly covering and become covered with leaves. By the next spring they will germinate and develop into seedlings. Soon, that is, soon as trees grow, they will be of bearing age. Men who have studied this sort of thing know that these trees, while not entirely free of blight, will not be quite as subject to it as their parent trees. The next generation will be even more immune, and eventually the immunity will be complete. Which means that Pennsylvania still has a chance to see these fine forest specimens return to their former glory, both as producers of lumber and nuts.

The catch is that Pennsylvanians are not giving the chestnuts a chance to come back. Up through the Poconos they are selling native chestnuts along the highways, and even here in Lehigh county there have been reports of old-fashioned chestnutting parties. A surer way of killing off the chestnut couldn't be found.

One man of this department's acquaintance picks every chestnut he can find. He won't even pass up a burr for fear of missing one. But be doesn't take a single nut home. Instead he heels each one into the ground, because he knows the trees that result are going to have a much better chance of surviving than did their forebearers.

Those who know the flavor of native chestnuts as compared to the importations found in almost every grocery store naturally find the temptation to pick and eat them hard to resist. But each year Pennsylvanians plant millions of evergreen seedlings that won't mature until their grandchildren grow up, and almost every session of the Legislature finds new laws passed to protect this tree or that plant from extinction.

So why not give the chestnut a chance? Voluntarily, if possible; under the law, if necessary. A finer, more noble, more useful tree never grew in Penn's Woods. Future generations of Pennsylvanians ought to be able to enjoy them as a part of their rightful heritage.—William D. Reimert, Executive Editor Allentown Evening Chronicle.

BOUNTY PLACED ON RED FOXES

(OFFICIAL RESOLUTION)

The Commission, after careful consideration of reports submitted by research workers, field officers and others, upon motion made, seconded and agreed to, adopted findings and facts and resolutions with rules and regulations placing a bounty on Red Foxes in certain counties, as follows:

(a) **Findings of Facts**—On the basis of a recent statewide survey of fox conditions made by research workers, and information and reports obtained from field officers and numerous other sources, the Pennsylvania Game Commission finds as facts:

1. That Red Foxes have increased materially in certain counties during the past three years due primarily to (a) peculiarly favorabe conditions throughout large portions of the species' natural range, (b) the absence in certain large areas of sufficient numbers of experienced fox trappers to exert proper control over the species, and (c) general economic conditions which have resulted in unusually low red fox pelt values, thus tending to reduce the number of animals taken for their fur;

2. That in all the counties embraced within the Commission's field administrative divisions "C", "E" and "F", said Red Foxes, due to their current abundance, are believed to be destroying game birds and animals to an unreasonable degree, and their numbers should be reduced in order to protect said game birds and animals;

3. That Gray Foxes, animals not found in large numbers in most of the counties within said field administrative divisions until recent years, seem to have been increasing in many of the counties in question because hunters and trappers have not been sufficiently encouraged to keep the numbers of Red Foxes in check; and

4. That the most effective way to bring about a prompt reduction in the numbers of Red Foxes and to discourage the further spread of Gray Foxes in the counties embraced within said field administrative divisions is to pay a reward or bounty for the killing of Red Foxes during a limited period.

(b) **Resolutions Fixing Bounty on Red Foxes; Rules and Regulations**—WHEREAS, The Pennsylvania Game Commission of the Commonwealth of Pennsylvania is of the opinion that it is desirable and necessary for the better protection of game birds and game animals to pay rewards or bounties to encourage the killing of certain additional predators in the counties embraced within its field administrative divisions "C", "E" and "F" for a temporary period;

1. THEREFORE, BE IT RESOLVED, That the Pennsylvania Game Commission of the Commonwealth of Pennsylvania, acting under the powers and authority vested in it by the provisions of Article XI, Sections 1101 and 1102, of the Act of Assembly approved June 3, 1937 (P. L. 1225), entitled, "An act concerning game and other wild birds and wild animals; and amending, revising, consolidating and changing the laws relating thereto", upon motion made, seconded and adopted at a regularly called meeting held this 18th day of April, 1940, hereby offers and agrees to pay a reward or bounty of Four Dollars ($4.00) for each Red Fox killed in a wild state on and after July 1, 1940 and continuing through to March 31, 1942, inclusive, unless this action shall be rescinded or changed prior to the conclusion of said period, in the Commission's field administrative divisions and counties as follows:

Division "C", composed of the counties of Bradford, Columbia, Lycoming, Montour, Northumberland, Snyder, Sullivan, Tioga and Union;

Division "E", composed of the counties of Cameron, Centre, Clearfield, Clinton, Elk, Jefferson, McKean and Potter; and

Division "F", composed of the counties of Butler, Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango and Warren;

said reward or bounty to be paid only when the skins or pelts of the animals killed are presented in the manner and under the conditions stipulated in the act aforesaid; and no reward or bounty shall be paid for Red Foexs which were not killed within the counties named, or which were reared or held in captivity.

2. BE IT FURTHER RESOLVED, That the foregoing resolutions and rules and regulations shall be duly published in accordance with the provisions of Section 1102 of Article XI of the act aforesaid in the May and June, 1940 issues of the PENNSYLVANIA GAME NEWS, the first named issued of which will be off the press on or before May 1, and this declaration of a bounty on Red Foxes shall also be brought to the attention of the public through other available channels, the Executive Director of the Pennsylvania Game Commission being hereby authorized and directed to certify these resolutions and rules and regulations as and for the act of the Pennsylvania Game Commission.

I hereby certify the above to be a full, true and correct copy of the resolutions establishing a bounty on the Red Fox in certain counties from July 1, 1940 to March 31, 1942 inclusive, as adopted by the Pennsylvania Game Commission at a meeting held April 18, 1940; and that such action as it affects the several counties of the Commonwealth is hereby published as required by the Act hereinbefore cited.

SETH GORDON, *Executive Director,*
Pennsylvania Game Commission.

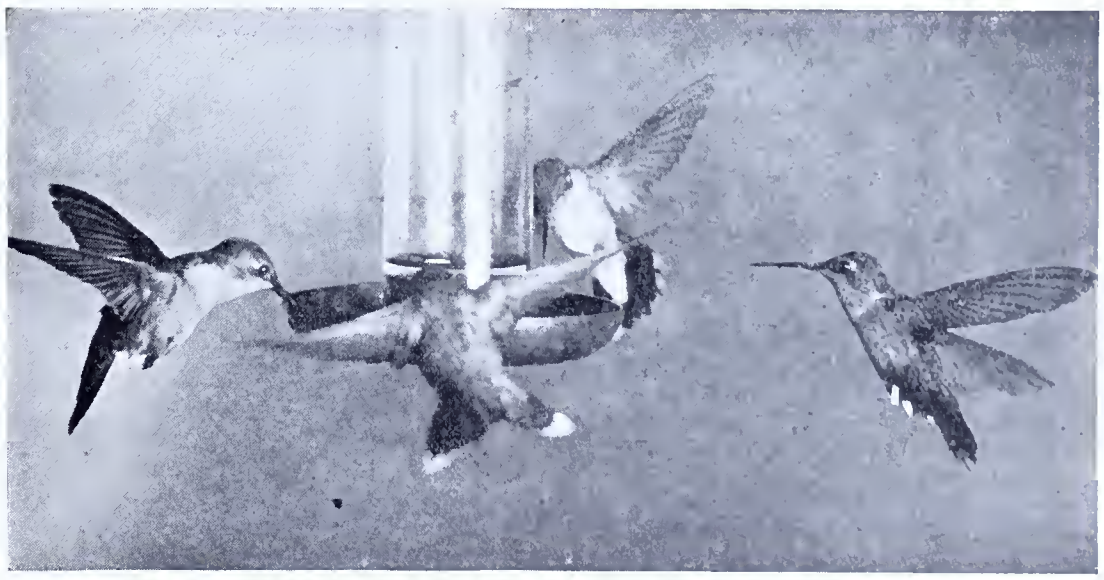


Photo by Prof. H. E. Edegrton

Hummingbirds drinking sugar water out of glass vial.

APPROVED FEDERAL AID PROJECTS

The Division of Game and Inland Fisheries of the North Carolina Department of Conservation and Development proposes to use Federal Aid in Wildlife Restoration funds to conduct an investigation to ascertain the status of fur-bearing animals and to determine means by which the returns from this important source of revenue can be increased.

Illinois submitted a project for the purchase of 1,129 acres of land in Lee County. The area under consideration contains numerous potholes and marshy spots, making it a desirable area for waterfowl, prairie chickens, fur-bearing animals, and other forms of wildlife. Plans call for development of the area as a waterfowl refuge and game management research station.

The Kentucky Fish and Game Department has proposed the use of Federal Aid funds to defray the cost of drilling one deep and four shallow wells on the Flatwoods Wildlife Restoration Unit in Pike County.

Colorado's program for the purchase of the Cathedral Creek Deer Winter Range is one which will benefit the animals in Rio Blanco County, one of the best deer producing areas in the State. Although abundant summer range is available, the severe winters cause deer concentrations in the stream valleys where emergency winter feeding is often necessary.

The Oklahoma Game and Fish Commission submitted a new project to continue its work of reestablishing quail.

The Texas Game, Fish and Oyster Commission recently released 200 wild Cuban guineas on three south Texas areas in an effort to add to the wildlife supply of the Lone Star State. It has long been believed that wild guineas will prosper in several sections of Texas. In Cuba the wild guinea, which is not as plump as the domesticated guinea of the United States but which is more streamlined, is considered a rare game bird and hundreds of Americans travel to that island annually for that sport.

The Division of Game and Fish of the North Carolina Department of Conservation and Development has proposed a Federal Aid program to increase the permanent cover and food-bearing plants on the Sandhills area in south central North Carolina which embraces approximately 40,000 acres.

The Connecticut State Board of Fisheries and Game has submitted a proposal to use part of its Federal Aid funds to establish two similar areas in each of three state forests, develop one area in each forest for wildlife according to present recommended practices keeping in mind good forest practices as well as wildlife management, and use the other as a check area. Records will be maintained to ascertain costs of such operations and the relative value of treatment will be determined by comparison with comparable untreated areas.

A project calling for the erection of headquarters buildings and two overnight cabins were approved for the West Virginia Department of Fish and Game, on its recently acquired 9,000 acre Nathaniel Mountain Wildlife Management project.

The Ohio Division of Conservation and Natural Resources has succeeded in reestablishing ruffed grouse in several places by reintroducing the birds in suitable habitat. The program has proven so satisfactory that it plans to expand it with Federal Aid funds. thereby providing breeding stock on eight refuges, seven of which are in the south central part of the State.

The Arizona Fish and Game Department submitted plans for a statewide wildlife resource survey as a Federal Aid investigational project.

The largest number of deer ever reported to the Conservation Department was taken in New York State by deer hunters during the 1939 fall hunting season. A total of 14,511 were killed. The increase was due largely to opening certain counties bordering Pennsylvania for the first time in years.

Leasing of the first of five game restoration areas of approximately 25,000 acres each which the Texas Game, Fish and Oyster Commission will take over for the propagation of deer and turkey has been completed.

According to the Forest Service of the U. S. Department of Agriculture, "Communities now own and manage more than 1,500 forest areas, containing approximately 3,000,000 acres. In many instances, this ownership and management has been financially profitable. In many more instances, it has been socially profitable."

Photos by Alexander Photo Studio, Nanticoke.
Deer caught in the fork of a tree during severe spring floods on upper Susquehanna River.

Repeated experiments have proven that the temperature of a hibernating animal is usually about five degrees lower than the surrounding air . . . so, if the air were so cold that the animal's body temperature went below the freezing point, it would freeze to death . . . which is probably the reason most animals "dig in" for the hibernating period . . . Incidentally, heart action is almost suspended during complete hibernation . . . for instance, the heart beat of an active ground squirrel is normally around 350 a minute . . . yet the heart of the same animal slows down to about seventeen beats a minute—or about every sixteen seconds—during hibernation.

Although the fox is a member of the canine family and very much like a small dog, its eyes are catlike . . . a dog's eye is very different from that of a feline . . . it is more round in shape and has other differences.

Professor C. M. Aldous, of the University of Maine cooperative wildlife research unit, in which the American Wildlife Institute cooperates, recently announced that the average Maine buck deer weighed 147.6 pounds and the average doe 103 pounds. The former is 38.9 inches tall at the shoulder and the latter 35.2 inches. This results in a grand average of 125 pounds in weight and 37 inches in height for Maine's whitetails.

Within national forests there are 36,534,713 acres in 661 wildlife refuges and sanctuaries. C.C.C. enrollees have improved and developed these wildlife refuges; worked on game censuses; planted wildlife food; captured big game and transported it to understocked areas; built fish hatcheries and rearing pools, and stocked thousands of streams and lakes with millions of young fish.

Same as opposite, but showing more detail. Note how high the water was at the time the animal was caught.

NEW BOOKS

BIRDS IN THE GARDEN and How to Attract Them, by Margaret McKenny—Nature-lovers who want to enjoy the companionable charm of birds around their own homes have here the first complete guide-book ever written especially for them.

"Birds in the Garden" explains everything one needs to know about attracting birds to the garden, feeding and caring for them under all conditions, and getting the most out of them not only in beauty and song but as protectors of the garden against destructive insects and other pests. It is packed full of practical information and helpful advice on such questions as: What should be planted in the garden to make birds stay when they come? What food and shelter should be supplied? How can birds be protected from their enemies? How can they be of help in gardening? And there are fascinating chapters on how to distinuish birds by their song; how to tame wild birds and make them pets; on bird migration, bird photography and community bird sancturies.

"Birds in the Garden" is lavishly illustrated with photographs and paintings in full color, depicting bird life in all its variety and giving a quick means of identifying the many species of birds which the properly planted garden will bring to your door with their color and song.

Miss McKenny has written this new kind of garden and bird book with clarity, with charm and with the genuine knowledge of the subject which has distinguished her previous work in this field. "Birds in the Garden" is a book to read through for sheer enjoyment as well as for its practical helpfulness as a guide to a new and rewarding aspect of gardening.—Published by Reynal & Hitchcock, Inc., 386 Fourth Avenue, New York. Price $5.00.

CANADA GOOSE KILLS FISH HAWK

Mr. S. H. Barrington, Township Line Road, Norristown, Pennsylvania, has applied to the Game Commission for a permit to have a male osprey, or fish hawk, mounted. The circumstances surrounding the killing of this bird as given by Mr. Barrington are:

"On April 26, 1940, the osprey was perched in a tree above a lake on the Irvin Estate, Port Kennedy. In the middle of the lake on the side towards the tree is a man-made perch on which is the nest of a Canada goose. The osprey dived within about fifteen feet of the nest and the gander went for the osprey. It hit it with such force that the osprey was unable to take off and after a fierce struggle the gander held the osprey's head under until it drowned."

The Biological Survey estimates that between fifty-five and sixty million migratory waterfowl winged their way northward to the breeding grounds in Alaska, Canada and northern states this spring.

Thousands of CCC boys now continue their studies while in camp and receive credits toward their elementary school certificates or high school diplomas, according to the United States Commission of Education. This crediting of CCC subjects has been made possible through the cooperation between the CCC and various state departments of education.

WITH THE CLUBS

John Lotta, Sharpsburg, trailed this house cat in a three mile circle for three days but he finally caught up with him. Sportsmen should patrol their old stamping grounds frequently to see that predators are controlled.

The Littlestown Fish and Game Association, Littelestown, is planning to erect a recreation building which will house an indoor rifle range. The surrounding land will be used as a game refuge. Sometime ago the association sponsored a farm and game show in cooperation with landowners which did much to knit the two groups together.

The Ridge Runners Sportsmen's Association, Mahoning, recently purchased a small tract of land upon which they expect to build a clubhouse.

The Beaver Sportsmen's Club, Beaver, is planning to enlarge its phcasant propagating program this year and expects to carry on some extensive food and cover developments.

The New Hope Fish, Game and Forestry Protective Association, New Hope, is putting out some 20,000 trees and shrubs to provide food and cover for wildlife. Many willow trees are also being planted along local trout streams.

The North Butler County Hunting & Fishing Club just completed a stream improvement project on Bear and Silver Creeks. The work was made possible through a $3000 W.P.A. grant. The club also secured a 760 acre tract of land to be set aside as a farm-game refuge area. It also purchased a 13 acre tract upon which several trout rearing ponds will be constructed. For this purpose the club obtained and is sponsoring another $10,000 W.P.A. grant.

The Cambria County Sportsmen's Association is sponsoring a ringneck pheasant rearing program by contributing $20.00 worth of wire to associate clubs for each pen built.

The North Berwick Hunting & Fishing Club is planning to plant 5000 trees on hillside farms to improve cover conditions for wildlife.

The Ridgeway Rifle Club will carry on an extensive game food and planting project on its 176 acre and adjoining properties.

Camp 63 of the United Sportsmen of Pennsylvania plans to establish a propagation area and to plant many nuts.

The Six Springs Fish Hatchery Association expects to propagate at least 35,000 trout fingerlings furnished by the U. S. Bureau of Fisheries through the cooperation of the Fish Commission.

The year's prog·am of the Mill Creek Sportsmen's Association, Inc., will include the maintenance of several refuges, conservation education in the schools, awarding prizes to boys for controlling vermin, farmer cooperation, game purchases, rabbit drives, and a winter feeding program.

The Hempfield Farmer's and Sportsmen's Association, Salunga, has set up four refuges in its district and hopes to establish several more. The association is zoned in eleven zones and the aim is to set up one good refuge in each zone. In its first ten months of organization the club purchased over 300 rabbits.

The Pioneer Fish & Game Protective Association, Allentown, is sponsoring the formation of a soil conservation district. The program already is well under way. It is also endeavoring to obtain the cooperation of the city in sponsoring a W.P.A. grant to improve local trout streams.

For the past three years the Macungie Rod and Gun Club, Macungie, has been maintaining a private sanctuary covering approximately 16 acres, about one-fourth of which is planted to food and cover for wildlife. The club has also been contracting with farmers in different localities in its alloted territory for small feed patches in corners of fields and along fence rows. These contracts, plus the maintenance of the sanctuary, cost the club only about $65.00 a year.

The Mercer County Sportsmen, Greenville Camp, reports that 41 skeet shoots were held at its newly lighted skeet ground last year.

The Ceneral City Sportsmen's Association, Central City, instead of buying rabbits in the future, plans to purchase several hundred traps and issue them to responsible boys and teach them how to use them properly. The association feels that if it can control the weasel by this method it will save more rabbits than the club can afford to buy. The boys will be paid an additional ten cents for each weasel they catch.

The Keystone Sportsmen's Association, Inc., will hold its Second Annual Outing at the West End Republican Country Home, north of Harrisburg, on June 9. All sportsmen are cordially invited to be present. There will be many tournaments, awards, entertainment, plenty of eats and door prizes.

The Tussey Mountain Sportsmen's Club is the name of a new association organized April 22, 1940, by sportsmen from Harris Township and vicinity, Centre County. The new club expects to undertake a rather comprehensive conservation program locally, with special emphasis on farmer-sportsman relations.

The Conemaugh Valley Sportsmen's Association recently purchased 113 acres of land in West Wheatfield Township, Indiana County. The tract joins thirty acres of timberland under lease to the club, on which lake, cottage sites, rifle range and trap shooting equipment is located. The newly acquired tract is approximately 90% woodland, and is considered one of the best pieces of hunting ground in the community, being particularly adapted to squirrel, grouse, rabbit and deer hunting. On the property is a log house, constructed more than 100 years ago, which the club plans to repair and improve, and will eventually be used by the members. Detailed plans for the property have not been worked out, and it is planned to consult with District Game Protector Pinkerton, of Indiana, in order to cooperate as much as possible with the Game Commission.

The Chester County Rod and Gun Club, Coatesvile, celebrated its silver anniversary this year. The association is 25 years old and has a fine record behind it.

WITH THE CLUBS

Photo by John Glenn.
These half wild dogs were traced to their lair by Deputy Game Protector John Glenn, of Jessup, after he caught them chasing deer.

The East Mauch Chunk Conservation Club aised 500 brook and rainbow trout for spring tocking, and planted 7000 red and white pine rees on abandoned pasture lands.

Henrietta Sportsmen Association, Donald Iorton, Secretary-Treasurer, Martinsburg, 'a. The association is planning to conduct a ermin campaign as a part of its initial pro-ram.

The Essex Archers, of Newark, N. J., won he team trophy for first prize at the fifth nnual Indoor Archery Tournament of the J. S. Gauge Archery Club, at Menlo Park n Sunday, February 25, 1940. The winners ad a total of 1786 points.

Philadelphia Archery Association came econd with 1766 points. Bethlehem No. 1 eam was third. Other clubs placed as fol-ows: Sauken, Moorestown, N. J., 1704; Naza-eth, 1672; Loxley Bowman No. 1, Lansdale, 645; U. S. Gauge No. 1, Sellersville, 1630; enni-Lenape, Sellersville - Perkasie, 1494. 'here were also teams from Lehigh Univers-ty, Bowmen of Gwyned, Philadelphia, Park roft, and the Walden Archers of Allentown. 'here were 103 archers registered.

During the fiscal year 1939 a total of 436,648 irds were banded in the United States and anada. The total for the State of Pennsyl-ania was 11,428.

FOX HUNTERS MEET IN HARRISBURG

The annual meeting and banquet of the Pennsylvania State Fox Hunter's Association, Eastern Division, was held in Harrisburg on May 4, 1940, with 72 members and guests present. The President of the Association, Mr. Eli Grable, Washington, Pa., presided, and Dr. F. S. Birchard, Montrose, Pa., was the Secretary.

The Resolutions and Legislative Committee had met during the afternoon at the Penn-Harris Hotel and presented resolutions which were adopted. Among the resolutions were recommendations for legislation to further protect and encourage the sport of fox hunting; opposing a bounty of any kind on red foxes; and pledging cooperation with the Game Commission and other agencies. The appointment of a special committee to draft a bill for presentation at the next session of the Legislature embodying the recommendations of the Association was authorized.

Among the speakers were Joseph G. Darby of Pittsburgh; Seth Gordon, Executive Director of the Game Commission; O. J. Shriver, Greene County; Lloyd Reeves, Montgomery County; O. Ben Gipple, Dauphin County; J. Howard Carr and William Gipe, York County; D. Edward Clark, Washington, D. C.; R. M. Hutchinson, Lancaster County; Joseph Darlington, Perry County; and John L. Neiger, Lackawanna County.

At the conclusion of the meeting it was decided to have the next meeting and banquet of the Eastern Division of the Pennsylvania State Fox Hutner's Association in Harrisburg on the first Saturday evening of May 1941.

Prosecutions for the month of March totalled 122 and penalties collected amounted to $3,417.50. Total penalties collected from June 1, 1939 to March 31, 1940 (10 months) amounted to $66,880.72.

JUNIOR CLUBS

Editor's Note: Many other sportsmen's organizations also have Junior Clubs. The Meyersdale Sportsmen's Association recently organized a Junior group which is set up as follows:

"I shall be glad to give you details of our Junior Organization in answer to your inquiry. Although I personally feel that the structure of junior sportsmen's associations in various communities cannot be given a general classification, the outline below may prove workable where memberships do not exceed one hundred.

"To become a junior member of our association, an aspirant need have no qualifications other than the desire to become a true sportsman. Dues of ten cents per year are paid by each member to make him feel that he is contributing financially to the work of the club. No definite responsibility is placed on the shoulders of junior members—they have no vote at meetings—yet each member feels that he is an important factor in the association since he is called upon occasionally to help senior members complete some conservation project or other work.

"Every member in the junior club has a sponsor who must be a member of the senior association. These sponsors are held responsible for the sportsmanship of their proteges, and also their education along lines of game laws, wood lore, etc. Senior members find this work interesting as well as profitable in a common benefits sense. The primary theme of all junior club work is to instill in these enthusiastic lads the fine, humane hunting sense which began to die when modern firearms were taken into the forests —to keep the word 'hunting' from going down in the English dictionary as a synonym for 'butchering'.

"As yet our junior club is not affiliated in any way with the Parent-Teachers Association. This comes to us as a unique suggestion for which we are grateful."—Gene Bolden, Secretary.

A wildlife exhibit marked the beginning of the Wilkinsburg Sportsmen's Association's 16th year.

THE BOUNTY SYSTEM

« « « By Robert H. Mumma

PREDATORY animal control was considered absolutely necessary many years previous to the creation of the Game Commission of Pennsylvania. The original bounty system was not inaugurated as a measure of conservation; but as a means of exterminating any species of animals considered undesirable.

Apparently the basic principle of the present bounty system is the controlled conservation of predatory animals. To determine the true status of suspected predators the Game Commission has persistently reverted to scientific research and positive evidence compiled by the field personnel, efficiently trained for this initial purpose.

The primary fundamentals of the bounty system are theoretically satisfactory. However, practical application of any bounty system must of necessity be subject to constant change. To exterminate any species of animals would be detrimental to the best interests of conservation; and definitely inconsistent to a sound wildlife program.

It is practically impossible to ascertain the exact cause responsible for the death of each predatory animal. Since a large majority of the bounty claims are acknowledged during the winter months; with the pelts received intact; it is self evident that the trapping element is the primary agent responsible for the control of these animals. Inevitably they are trapped at an opportune time when the pelt of each individual animal is "prime" or at the peak of its commercial value. They are seldom reduced to a serious point of extinction; the general conception invariably trends toward trapping the surplus animals without inflicting noticeable damage to the seedstock. Thus an equal average number would be presented for bounty claims each year; with the exception of a serious reduction caused by nature's cycle or a migration due to extreme climatic conditions in the areas north of Pennsylvania.

Within the past decade the fluctuating fur market did not warrant extensive trapping; apparently the bounty system injected the necessary tonic required to stimulate the trapping interests. During periods of economic disorders predatory animals are subject to an abnormal siege, noticeable among the industrial and semi-agricultural regions; unemployed men devote their time to pursuing and killing predatory animals. Without question, their interest is purely materialistic.

There is a constant public demand for the promotion of humane methods concerning the control of these animals. Modern civilization demands improved ethics! and justly so. The barbarous "poisoner" reverted to unorthodox methods, and the ultimate results were astonishingly shameful.

The present bounty system stimulates the killing of animals during the summer months. Consequently the litters of many predatory and game animals are subjected to a lingering death. Trapping predatory animals during the spring and summer months invariably results in the destruction of game and valuable fur-bearing animals; plus the destruction of their respective litters.

Much remains to be proved before this type of control may be considered satisfactory relative to a sound wildlife program. Natural enemies have never depleted any species of wildlife to a serious point of extinction; man alone is responsible for the continuous destruction of natural resources.

Unfortunately mass production is not one of nature's basic laws; therefore we must exert every resource at our command to conserve all wildlife as much as consistently possible.

Probably the most constructive asset of the bounty system is its educational value. Predatory animal control has been discussed pro and con in distinguished sportsman's magazines. Intelligent discourse through these mediums tends to promote a general interest relative to conservation and management of wildlife.

Further study of the bounty system may prove it to be an ineffective method of controlling predatory animals; also a financial outlay of thousands of dollars annually that possibly could have served a more material purpose.

It is eminently necessary to cooperate with nature's forces rather than attempt to revamp her original program. Nature's fundamental laws can not be changed. Neither can nature's cycle be regulated to meet the present demands.

May established facts always be our primary reasons for recommending increased bounty rates or for branding any animal as underisable rather than personal grievances or pet theories.

"I have made a study of snakes for the last ten years and pride myself on knowing quite a bit more of their habits than the average sportsman. I sincerely believe that the blacksnake does a lot more good than harm, not only by his extensive feeding on harmful rodents, but by scaring off several prominent species of the poisonous variety. I know of a camper friend that boasted of killing a large blacksnake in a rock pile near his cabin; several months later he found the same pile occcupied by a nice, friendly pair of rattlers.

"One day this summer I killed 31 watersnakes and 2 male rattlesnakes with a .22 target pistol, near Austin in Potter County. The watersnake is a true killer. I've seen them bite chunks out of fish swimming by, when they were so full that they were swelled to twice their normal size.

"The common house cat, stray or otherwise, is a real nemisis of the baby rabbit, and any dog, finding a rabbit's nest, would probably make short work of it.

"Sometimes, this thing of killing off the game's enemies so we can blow it apart a little later on strikes me funny. Most animals kill to survive, we do it for the sport. I was lucky enough to get a buck last season, and every Saturday since then I have put ten pounds of corn out in the woods to help keep the poor starving deer alive during the winter, so I can shoot them in the fall."— E. Jackson, McKeesport, Pa.

There are today slightly more than 5,000 American bison in the United States and Alaska, where probably 60,000,000 roamed the ranges about 100 years ago, it is revealed in census figures recently reported by the Bureau of Biological Survey.

Albion News Ptoto

Without the fanfare or horns and the yipping of several dozen dogs, these four Albion Area hunters, with the assistance of their four well-trained hounds, brought home the Mr. and Mrs. Reynard pictured following an eight hour chase one day last February. Pictured, from left to right, are Chas. Shauberger, Tud Bowen, Albert Long, and Ben Carmen, who killed both of the foxes. The hunters traveled by auto and afoot. As the price of red fox pelts is down to three dollars, fox hunting is now followed more as a sport.

FOX HUNTING NOTES

« « « By W. Newbold Ely, Jr., M.F.H.

THOSE hound men in America who have been lucky enough to have some Fell blood from the famous Lakeland Country of England cherish it just as they do the Welsh blood from the same type of country, viz.—a wild rough country where hounds have to do it all, find, hunt and kill their foxes without any human assistance, and most of the time over bare rocks with bad scenting. Of the Fell packs, one of the most historic is the Eskdale and Emmerdale hunt. The B. B. C. broadcast recently a recording of their "Tatie-Pot supper."

"From what one could glean over the air the Master, Mr. William C. Porter, Field Head, Eskdale, was in the chair and had the support of his huntsman, J. W. Porter. The latter would appear to have much of the lung power that was attributed to John Peel, whose memory was celebrated in song, as also were the deeds of old Tommy Dobson, who was Master of this pack from 1857 to 1910. Although one did not hear it, one felt that the company had also 'toasted' Jim Bowman, one of 'Dalesman's' heroes. His name was mentioned by the chairman at the end of the recording."

Those of us who begin wondering if we should not retire that old hunter of ours at say 12 to 13, should consider that youngster in Mr. Jefford's country, "Cap" a chestnut owned by Chester Ranck of Paradise, Pa., which is 38 years old and according to local authorities is "a lively stepper in daily use." Incidentally Mr. and Mrs. Ranck just celebrated their silver wedding anniversary and Mr. Ranck used that good chaser "Cap" in his courting days.

The Weekly Livingston Republican of Genesee, N. Y., prints the following marvelous notice from the Genesee Valley Hunt:

"To please those who are unable to ride until they have been lunched, a drag hunt will take place from —— on ——, at —— o'clock.

"This drag will be laid over several dangerously high fences close to the road, so that those who have 'lunched' sufficiently will be able to compete with the grooms of gentlemen having horses for sale, before the eyes of the people in carriages.

"Every precaution will be taken to keep clear of woods, gullies, ditches, swamps, or any obstruction whatsoever which might possibly call for intelligence or education in horse or rider.

"Some very swift hounds have been secured, and the drag will be laid as strong as possible, so that it is sincerely hoped that gentlemen racing with each other will not be annoyed by these stupid animals. Should they prove a nuisance, however, the brutes will be dispensed with altogether and the line flagged."

This may be pretty strong medicine to many of our good landowners but as Sir Walter Scott said: "I cannot say how the truth may be; I tell the tale as 'twas told to me," and "X. Y. Z." writes this in a recent issue of Horse & Hound:

"The policy of the Government in wartime is arable farming, and according to 'Essexonian' the best recipe for a good crop of wheat is for horsemen to gallop over it. This, by the way, is borne out in my county, where on Saturdays the Hunt ride straight across the wheat-fields, and no better crops are harvested anywhere."

One of the things at least the War is doing is leveling all sports in England as it is shown by this quotation from a letter to Horse & Hound:

"'Come, wilt thou see me ride?' exclaims Hotspur in **Henry IV.** And he goes on to tell his dear Kate that she will love him infinitely when he is 'O' horse back.' As Squire Osbaldeston told Nimrod, there is 'nothing like pigskin,' and even the 'sage of Chelsea,' splenetic old Carlyle, left it on record that the best doctor was a horse. And in his own time John Fothergill wrote in his delightful 'Innkeeper's Diary,' in the following strain: 'To be on a proper horse is a revelation, a new life, perhaps the only true one.' I may add that the author records that he used to turn out with the East Sussex complete with umbrella. He adds rather naively that he was not popular, and yet others have committed worse solecisms. After all, it does not matter so much how you turn out if your heart is in the right place. Hunting is either national and democratic or it is nothing.

"It was the opinion of the late Lord Willoughby de Broke that the sportsman with one horse was the backbone of any Hunt, which few will be bold enough to deny. It is the local doctor, lawyer, farmer, professional man, butcher, and tradesman who keep the hunting flag flying in citadels where the scarlet is a red rag to the susceptibilities of cranks and puerile humanitarians. These same good sportsmen have their day a week—with a bit of luck three days a fortnight—with the local pack. They play their humble part in maintaining the continuance of fox hunting, and in the majority of cases they are their own grooms and tack-cleaners. It is simple and plain, but it gives a lot of fun at a very reasonable cost. I know of a bank manager who feeds and grooms his own horse; a girl who all the week works in the City of London and hunts each Saturday throughout the season; and more than one actor and actress who spend their leisure time out hunting.

Pennsylvania furs contribute much to the fur market of the world.

"Speaking personally, I have been a one-horse sportsman all my life. Years ago my father sent me to work on a farm, and I could only hunt one day a week. At that time I only possessed an old 'pound a leg' mare, which I used to 'do' myself. With anyone else she was a vicious old beast, but we were great pals, and had some rare times together. I loved it all, the anticipation of the hunt, the grooming, the tackle-cleaning, and the whinny of welcome at feeding times. These are ineffaceable memories, and from that day to this I still receive a thrill, as did Jorrocks, from 'the clink of the couples from a vipper-in's saddle.' There must be scores of similar cases of people who have received more joy and satisfaction, to say nothing of peace of mind, from owning one horse than a whole yard full of high-priced hunters, or stately strings of point-to-point horses."

Farmer's Guide in its January issue states:

"Of 580 red fox stomachs examined at the University of Michigan it was found that 75 per cent of this animal's diet consisted of rodents and insects, 17 per cent wild fruits and 7 per cent birds."

The Lake County Star of Baldwin, Michigan has this interesting paragraph:

"H. D. Ruhl, chief of the department's game division, points out that foxes, in Michigan, this winter are apparently near the peak of their present cycle of abundance. Hudson Bay Company records over a 100-year period show such peaks of abundance as occurring every nine to ten years."

George Taylor of Delmar, N. Y., has a shoe for the paw lost in a trap last year. The hound was in the trap several days before it struggled free and gangrene set in so part of the foot had to be amputated. An orthopedic doctor made what is like a miniature high shoe without a heel and the toe has a spring to cushion the hound's running which his owner says is as good as ever. However, it's just one more case for an anti-steel trap law, at least in the townships hunted by hounds."

EDUCATION IN CONSERVATION

« « « By Myron E. Shoemaker

FOR many years Pennsylvania has held the reputation of being a leader in conservation activities. The forest areas have been extensive and valuable, the mineral deposits have been a boon to all mankind, the agricultural industry has been on a par with any other section of America, the wheels of industry have continued to run, the recreational activities have continued to be enjoyed, and the entire public has been able to glean some measure of human happiness.

Most of these resources are confined to the rural territories where those who till the soil and manage the land strive to keep a supply of products flowing to the markets in the urban centers so that human progress will remain stabilized.

People living in the towns and cities also depend upon the landowner for a place to enjoy their recreation, whether it is hunting, fishing, hiking, or picnicking.

Pennsylvania also leads in organized sportsmen. It boasts of more clubs and a greater number of organized sportsmen than any other State in the Union. Yet only about 20 percent of the people who fish or hunt are affiliated with these clubs.

The other 80 percent roam the fields, forests, and streams with the idea that they have the sovereign right and capacity, in a free country, to prowl over anyone's property without permission or without consideration of the property owner's rights. They give little thought of extending to the farmer a similar privilege when he drives into town to purchase the products he needs or to enjoy the man-made recreational features in the urban centers.

As a whole they have little or no conception of the value of the natural resources which they wilfully or ignorantly destroy. They are not aware of the fact that the wheels of industry from which they receive their livelihood are kept running because of the natural resources. They are not conscious of the fact that the soil, forests, and waters are the three essential and basic elements of nature that make possible the recreational areas for their wildlife and other sports.

Among the organized sportsmen's groups are men who are at the helm of industry, who know the value of these resources and the value of recreation. These men are in a position to aid conservation and its many problems by allotting a little time, at different intervals during the year, to programs which can be conveyed to their employees visually through the use of lantern slides and pictures.

Such programs carefully planned and worked out would soon bear fruit, and ere long everybody in the state would appreciate the value of the natural resources and would use them wisely. They would help bring about a mutual relationship and understanding between the farmer and the sportsmen, thereby resulting in improved wildlife habitat and better farm management.

It would help to eliminate many of the posted areas which are now closed to recreational activities because of the abuse that has been inflicted upon the farmer by unscrupulous hunters.

Today there are industrial executives who have been approached and they are vitally interested. If the organized sportsmen can become better educated to the cause of conservation and to the fact that recreational areas are principally confined to the rural sections, then other citizens who are active in the out-of-doors can become educated if they have the materials placed before them in an able and systematic manner.

Future Farmers of America . . . and Wildlife

(Reprinted from North Carolina Wildlife Conservation.)

Destiny of Future Wildlife Supplies Depends on Landowners.

To produce two coveys of quail and two families of squirrels where only one was produced before is the goal of the wildlife conservationist. Only by preservation of breeding stock and provision of a suitable habitat can this objective be accomplished. Not only Congress but State legislative and administrative bodies and the people generally at last have begun to appreciate the value of preserving and restoring wildlife and to understand its close relation to the manner in which land is used.

Most encouraging is the interest shown by the members of the 126 local Future Farmers of America chapters in North Carolina, with 3,780 Young Tar Heel Farmers participating in a conservation program.

The active membership of the state Future Farmers of America organization is 11,200, most of whom are boys of high school age. Living in close contact with agriculture and having a first hand knowledge of the ways in which land is used, these boys by their attitude toward wildlife will determine its future status on their farms. Without their help and cooperation in future years a gradual decline of the benefits derived from wildlife on North Carolina farms will be seen. Consider, for instance, the relation of wildlife to pest control, the services of wild inhabitants in keeping the balance between injurious and beneficial organisms on the farm, and the meat and fur values of game animals; these will more than repay the farmer for his care. By practicing simple measures of wildlife management along with the important methods and improved farming practices learned in vocational agriculture classes the coming generation of young farmers should prevent many of the mistakes of the past, when the values resulting from wildlife were often disregarded.

Great abuse of wildlife supplies and of their rightful habitat has resulted from man's persistence in following so largely the trial and error system of learning. For example; Unwise drainage of swamps and marshes for agricultural lands, the felling of wild animal den trees, and farming methods which have destroyed suitable habitats of many forms of wildlife have caused many men who have farmed all of their lives to realize that mistakes have been made, that a sound land-use program must consider the value of natural resources on a long time basis. They know as a result of actual experience the shortsightedness of any policy which sacrifices a valuable natural resource for a temporary gain.

There are 302 Future Farmers of America chapters in North Carolina and this organization is doing a real job in its conservation program. The situation is essentially this: The destiny of our future wildlife supplies on farmlands depends upon the land use policies of its present and future landowners.

Disking of strips in woodlands during the winter months to encourage native volunteer wildlife food plants is typical of the wildlife management practices being undertaken by young Tar Heel Farmers in North Carolina.

THE MAIL BAG

"I wonder if you ever received a letter from a woman reader. I have just finished reading the February issue, and I think its contents are very interesting. I especially like, in this issue, "Babes in the Woods". It reminds me of a mother giving advice to her flock. I'm a mother of nine children living, and I know we give our advice because we want to spare lives, pain, work, and expense. I think of the law our state has for mothers to take good care of children and not to neglect them. But how many good mothers need that law?

Then I think of the hunter who would like to kill every animal he could and drag it home to eat, and not obey the law. I'm sure every good hunter is willing to obey the law the State has provided for wildlife. I like the advice given by the writer on being careful of human life. None of us mothers want our beloved husband's or son's lives snuffed out by careless hunters. We pick up our newspapers during hunting season and read where a hunter was killed, either by his own gun, or by someone else's.

I also like to read all articles on the ringneck. The men have a pen here with 48 nice ringnecks. I'm enclosing a picture and hope you can use it in the Game News. Every good sportsman should subscribe for this magazine. Everyone should have it. Believe it or not, I like the stories, too, about hunting trips. And the jokes are good. I liked that one about the fox chase an issue or so ago. I even read about the stolen dogs. If I see this letter or picture you might hear from me again. My husband doesn't know I am writing this. What would he say if he read it in the next issue?

I never killed anything but an owl in all my life. My husband shot at it with a .22 rifle, and I was tired of him missing. So I took the gun and killed the owl first shot. First shot in my life, too. That was 22 years ago. I was afraid the owl would die of fright.—Mrs. Dallis Murray, Richeyville, Pa.

The men have a pen with 48 nice ringnecks.

Is the C.C.C. a Benefit to a Community?

By Harold E. Russell

It appears sometimes that the C.C.C. camps are not getting the credit that is due them for the good work they are doing for game conservation.

Every honest-to-goodness sportsman should be thankful we have C.C.C. camps even though we just consider their work from the standpoint of game conservation. However, the benefits we derive from their work are unlimited, considering it from all angles. Let us take stock of their accomplishments:

Practically every C.C.C. camp in the State has at least one hundred, and some many more, men available in very short order to combat forest fires. The men are trained for this particular work and with the equipment and trucks they have always in readiness they can arrive at the scene of a fire in very short order and have it under control before it has done much damage, either to forests or game. This one part of their work cannot be praised too highly.

C. C. C. enrollees clearing out boundary line around a game refuge.

The camps cooperate with Game Protectors and sportsmen in feeding game. They erect all types of game feeders and keep them filled with food all the time.

Many of the C.C.C. enrollees are from cities, and prior to entering the camp know little or nothing about conservation work. By the time they have served their enlistment they are able to return to their home communities and carry on the work they were taught at the camp.

When a C.C.C. enrollee's enlistment has expired he leaves the camp in a better physical condition, more alert, and a better citizen all around because of the wholesome work and training he has undergone.

Because of the different training classes held regularly at the camp each enrollee is trained how properly to use practically all types of tools and to use them safely, how to use surveyor's equipment, to build roads, to operate road building machinery, to drive cars and trucks safely, and to do carpentry and masonery work.

In many instances C.C.C. camps are located in rural places where during deep snows the people living in these sections are usually unable to get out for supplies for several days or even weeks at a time. In such instances the enrollees promptly clear the roads so they as well as the other citizens can get out as quickly as the main highways are open. Often this makes it possible for rural folks to get much needed medical aid.

C.C.C. truck drivers are required to pull to the side of the road and permit an automobile traveling in the opposite direction to pass before they continue on their way. This pertains just to dirt or country roads, nevertheless it is one of the courtesies taught enrollees. Truck drivers in many instances assist motorists who have car trouble.

Let us take our hats off to the C.C.C. boys, and if for no other reason, consider them friends who are striving to make our sport and recreation **BETTER.**

Causes of Juvenile Mortality of the Ringneck Pheasant

(Continued from Page 11)

ing population was estimated to be 1 skunk to 30 acres; the fall density was about 1 skunk to 12 acres. More than 200 summer droppings of the striped skunk were examined superficially to determine whether or not this fur-bearer was preying on immature ringneck pheasants. No remains of pheasants were found in any of the feces; very few bird remains of any kind were found in them.

On July 6, 1939, after a heavy shower, three week-old pheasant chicks were found huddled together and drowned in a field of clover. From the evidence, it was considered improbable that any hen was with the unfortunate three immediately prior to their death. A hen and part of her brood had been killed in this field by a mower two days earlier. These chicks may have represented the remainder of the brood.

When the mother of a young brood has been killed, the chicks frequently succumb to some of the many hazards confronting them. If they are fortunate, they may be adopted by another hen, either with or without a brood of her own. On the study area a feather-marked hen (after two nesting failures) finally stole two chicks from another hen's brood. There was also evidence to indicate that occasionally a cock cared for a brood after the death of the hen.

Detrimental effects of weather are difficult to measure quantitatively. During periods of heavy rains many young chicks may die, owing to chilling, drowning, or exposure. In the summer of 1939 no heavy rains occurred during the time when most of the broods were at the vulnerable age.

An unusual adverse effect of weather upon young European Partridge *(Perdix perdix perdix)* was observed by Yeatter (1934). During continued rains in early summer, clay soil adhered to the feet of the young partridges and formed great balls of mud. The young birds were unable to move freely and died from starvation, exhaustion, or exposure. The writer has observed young killdeer *(Oxyechus vociferus vociferus)* in a similar condition. Mudballing has not yet been reported from pheasants, but it is a potential source of juvenile mortality in regions of clay soils.

During this study no special effort has been made to examine young birds for diseases or parasites. The small number of unexplained deaths (only 33) precluded the possibility of disease as an important mortality factor on the study tract.

Throughout much of the pheasant range, poultry roams over the fields. Pheasants are thus exposed to many poultry diseases and parasites, and the possibility of infection of the game birds is always present. Predators may aid in checking the spread of disease among pheasants by removing sick and weakened individuals that are easily caught.

As a means of reducing juvenile mortality, the use of flushing bars is recommended. By saving the lives of the females, young pheasants may be protected from the weather and enemies. The adoption of flushing bars will also increase the number of successful nests, as hen pheasants sometimes resume incubation of a nest after it has been mowed over. Where tractor-operated mowing machines are in use, flushing bars should be employed when cutting the first and second crops of hay. Flushing bars now in use on tractor mowers usually consist of an iron pipe fastened to the tractor and extending out over the swath. At intervals along this pipe, chains dangle into the hay and flush the birds ahead of the cutter bar. (See figure 1.) Owing to the high speed at which modern tractors travel, there is not enough space between flushing bar and cutter bar to allow the birds to escape. By the insertion of two elbows and another section of pipe, the flushing bar could be placed several feet in front of the cutter bar. Such an arrangement would be very effective in reducing mowing mortality among pheasants.

Summary

1. The average size of pheasant broods at the time of hatching was 9.7 chicks.

2. The average size of pheasant broods reaching maturity was 8.5 birds.

3. Juvenile mortality took 12.4 percent of the young pheasants produced on the study area.

4. At least 14 different mortality factors were observed. Most serious were the mowing operations, which accounted for 18.8 percent of the juvenile mortality.

5. Contemporaneous food habits studies of resident predatory species revealed the Cooper's hawk as the only important enemy of the pheasants.

6. The use of modified flushing bars especially on tractor mowers, is recommended as a means of reducing losses among immature birds and thus increasing pheasant populations.

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On Sunday, May 12, headed by its Chairman Harold Corbin, the Forestry Committee of the Huntingdon County Game, Fish and Forestry Association planted approximately 8,000 seeds of the Chinese Hairy Chestnut, one pound of Bittersweet seed, one pound of Siberian Pea seed and one pound of "nut pine" seed. The seed was planted in nursery beds preparatory to the distribution of seedlings during the spring of 1942. Also on May 12, the Petersburg Game Association planted approximately 1,000 seeds of the Chinese Hairy Chestnut. The Forestry Committee distributed 7,500 chestnut seedlings last month, along with the 4,000 seedlings distributed last spring. It places our total distribution to date at near 12,000 year-old seedlings. The Committee, this year, is extending its program by planting a larger variety of seed and it is hoping for good luck with the production of seedlings for next spring.—Howard Shilling, Secy.

Game Protector R. H. McKissick, Armstrong County, writes that a Mr. Pete Smith of Walkchalk, told him that during the severe weather in December he released three rabbits under a clover and timothy haystack. In March Mr. Smith moved the stack and found that the animals had eaten holes up through it. When the last batch was moved the rabbits ran out. All three were in excellent condition, and Mr. Smith claims he watched the stack very closely and doesn't think any of the animals ever left it.

The Chester County Federation of Sportsmen's Clubs is planning to hold its county wide picnic on June 1 at Andrews' Bridge on the Octoraro Creek, a few miles out of Cochranville. There will be lots of sport events and other recreational features including: Archery; Rifle, Revolver and Trap Shooting; Fly, Plug and Surf Casting; Quoits; Swimming; and Fishing.

Game Protector Elmer J. Turner, Ellk County, reports finding a coal black woodchuck on the highway apparently killed by an automobile.

Is Wildlife Management Worthwhile to the Farmer

(Continued from Page 7)

Can a farmer afford to have woods on his farm? In most cases the answer is clearly yes. He can afford it because he obtains usuable products from the woodland and even may obtain a cash income from it. It is only one step farther for him to appreciate the necessity of handling his woodland in such a way that these values are permanently maintained. Here, then, is a wildlife management concept of the first importance—proper care of woodlands. It follows quickly that any fence necessary to prevent grazing of the woodland by livestock would, of course, be worthwhile.

Can a farmer afford to have ponds, hedges, windbreaks, and similar types of semi-economic areas? If these ares are only good for wildlife, the answer is almost certain to be, "No". Fortunately, however, these areas can be made to serve many other values that are of great importance to the permanency and well being of the farm. Hedges, when planted on the contour and properly maintained, are a valuable soil conservation measure and are of benefit to the farmer in many ways in addition to being good for wildlife. similarly, ponds may be made to serve as sources of livestock water without in any way decreasing their wildlife value.

In conclusion, I would like to venture a brief description of what a well-managed farm can look like and how it can benefit wildlife. The livestock are confined to pastures; all woodlands, swamps, and ponds are protected from livestock. Fields and woods are not burned. Streams flow clear and cool and the banks are covered with vegetation—no straightening of meandering curves and no concrete bottoms. Woodlands are a natural, healthy community with trees of all sizes and native varieties—mostly straight-boled but with some snags and the margins surrounded with shrub borders. The fields are fitted to the land with luxuriant crops. Little erosion occurs in the winding contour crop bands that fit the topography like a custom-made garment. There is a network of well-kept hedges on many of the contour field borders. All odd corners such as rock outcrops, former gullies, streambanks, and similar areas are in thickets of shrubs or other protective cover. There is an equilibrium of plant and animal life. Woods and waters frame the crop fields in a stable soil. There are song birds for the insects, hawks for the mice, and foxes for the rabbits; a patch of violets here and a clump of orchids there; muskrats from the pond and a few skunks from the corner thickets to enrich the young boy's spending money. In the Viburnum hedge there is a covey of quail and the partridge drums in the woodland.

When a farmer brags about the 122 species of birds that visit his farm yearly; when he is proud that the rains no longer add color to his clear stream—then there will be conservation, health for the land, and happiness for the people.

Eroding streambanks destroy farmland, contribute to food problems, and are detrimental to fish life.

The same streambank after control by sloping and planting. The control has protected the farmer's crop fiields, will help reduce the amount of silt in the river, and improve it for fish and other wildlife, both in the water and on the land.

MICE INVADE APPLE ORCHARD

When a New Jersey farmer visited his apple orchard recently and found that field mice had injured more than 350 trees, he telephoned Bureau of Biological Survey officials in Washington for help. Two days later an expert from the Biological Survey's Division of Predator and Rodent Control was personally inspecting the orchard and recommending practices to prevent further damage to the trees.

The damage was done, Survey experts believe, during a 2-week period when 12 inches of snow covered the ground. The mice had completely girdled the trees. Nearly all the tap roots had been removed, and some trees had been cut off at the bottom. It is not unusual for mice to damage fruit trees, it was explained.

Orchards are often damaged by meadow and pine mice, the control experts added, but with correct preventative measures the damage can be avoided.

All orchardists should examine their farms before the onset of winter. If traces of mice are seen, control measures should be instituted immediately, since most damage by rodents occurs during winter.

Meadow and pine mice are the only kinds of mice known to girdle trees. Each leaves distinct signs showing their presence. Both speces are trail builders. Meadow mice are extensive surface trail builders and can be seen by the runways they have under grass cover. If trails are found under the grass precautionary measures should be taken.

Pine mice are more active as tunnel diggers and characteristically damage the trees by eating the roots. Unlike that of meadow mice, the presence of pine mice is not so easily discovered although these mice do construct a limited number of trails under vegetative cover.

Many farmers attempt to prevent damage to their trees by making a 3-foot clearing around the trunk of each tree, but few orchardists realize that when snow covers the ground the mice will burrow under the snow and thus cross the apparently protective "clearing."

To prevent damage to fruit trees, orchardists are advised to inspect their trees carefully each fall. If the presence of rodents is suspected the farmers should consult their Agricultural Extension agents or the Bureau of Biological Survey's rodent-control workers.

The Commission is proud of the splendid emergency service performed by the officers of Division B during the disastrous floods in the Wilkes-Barre area. Numerous reports of their splendid work reached the Harrisburg office, and the Commission is grateful to all those agencies and individuals who so thoughtfully acknowledged their service.

Junior Conservation Education

By Harold G. Gerper

Junior Clubs aid wildlife.—This picture shows C. E. Marsh, supervising principal of Southwest Greensburg Schools, and D. H. Michaels, principal of Harrold Junior High School, with Mr. Michaels' son, Gwyn, inspecting one of four shelters constructed on the land of John C. Geisel, near Greensburg.

RECENTLY the Committee on Conservation Education of the Pennsylvania State Federation of Sportsmen's Clubs made important recommendations to the Pennsylvania Department of Public Instruction in the matter of Junior Conservation Education.

Conservation-minded citizens and educators are slowly but surely beginning to realize the importance of finding a place in the school program for activities relating to the conservation of plant and animal life. Adult sportsmen's clubs and organizations of a similar nature are not new and the work accomplished by these organizations is known to all conservationists. However, the old adage that old dogs are not prone to learn new tricks comes to our mind and we suddenly become aware of the fact that conservation education involves certain fundamental principles of learning.

This being true, conservation must be learned during the time when habits are being formed and patterns of conduct are being formulated in the individual. Thus conservation must be taught to the youth of our country and in our public schools. Fortunately for the schoolmen the youth of our country is ready to learn conservation and merely waiting for the opportunity to present itself.

As evidence of what can be done in this field the writer wishes to present a resume of the activities of the Worcester Junior High School Sportsmen's Club.

Worcester Township is located in central Montgomery County and is distinctly agricultural in nature. Trapping, gunning and fishing are all done to some extent within the borders of the township. Many of the local sportsmen are active in sportsmen's organizations in nearby communities. The Junior High School has a school population of about 125 boys and girls between the ages of twelve and seventeen.

The first meeting of the club was held in September of 1938. At that time approximately 30 boys became charter members and formed the largest club in the school. One girl asked permission to join but was refused due to the overwhelming majority of the boys. The membership now numbers fifty which represents about 80% of the boys in the school.

The club operates under a constitution and by-laws which provides for officers, dues, committees and stated meetings.

The standing committees are the following: Fish, Game, Forestry, Program and Publicity. The names of these committees are indicative of the duties of each.

The regular business sessions are held every two weeks. The meeting lasts for about one hour and is held during regular school hours. A regular order of business is followed during which all committees report and plans for future projects are discussed. At the conclusion of the business session the Program Committee provides entertainment for the remainder of the hour.

Each member pays $.50 per year dues. This entitles him to the club button, to enter all contests conducted by the club, and to participate in all activities. The contests for prizes create much interest. Prizes are awarded for big fish, big muskrats, and for killing water snakes, turtles and crows. The names of the winners of these contests are published in local newspapers.

The following is a partial list of the conservation activities of this club since its inception in September 1938:

1. About 50 game shelters built and maintained.
2. About 100 Game Commission posters posted.
3. About 25 Fish Commission posters posted.
4. About 40 crows killed.
5. Approximately 50 water snakes killed.
6. Approximately 2 bushels of shellbarks and black walnuts collected and turned over to District Forester for planting.
7. 1500 Trees from State Nursery planted.
8. Assisted State men in stocking dams in nearby streams.

From the above it is quite evident that the club has carried out its objectives as far as conservation is concerned, but what does this mean in terms of educational values. In conservation activities there are involved some of the most fundamental principles of learning known to present day educators. Among these are:

1. Pupil need.
2. Pupil interest.
3. Concreteness of subject matter.
4. Learning by doing.
5. Competitive enterprise.

Educators have long recognized seven cardinal principles of education which are the outcomes of a sound educational process. These principles are follows:

1. Ethical character.
2. Worthy home membership.
3. Leisure time activities.
4. Vocational fitness.
5. Health of mind and body.
6. Civic responsibility.
7. Command of fundamentals.

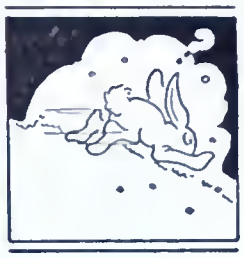
A careful analysis of these and of the activities of the Junior Sportsmen's Club will reveal that there is close correlation between the two and that conservation lends itself adequately to such a learning process.

After two years of fascinating experience in this work the writer believes and sincerely hopes that the Department of Public Instruction and the Pennsylvania State Federation of Sportsmen's Clubs will further collaborate in a program of conservation education in the public schools of Pennsylvania.

The timber wolf has a worse reputation than he deserves. According to the U. S Bureau of Biological Survey and the Hudson's Bay Company of Canada, the stories of timber wolves attacking man are all bunk. There isn't an authentic case on record, these authorities say, of a wolf attacking a man. In reality, wolves are cowards. They do kill sheep and cattle, and occasionally a wolf will go beserk, killing merely for the fun of it.

* Sponsor—Worcester Junior High School Sportsmen's Club, Worcester, Montgomery County, Penna.

SPORTSMEN'S QUERIES



By CHARLES F. STAMBAUGH

TRAINING DOGS ON DRAGS

Q. Is it legal after April 1 to train dogs by using a drag made from the bedding of a raccoon?

J.R.F.—York, Pa.

A. No. We have an opinion from responsible legal authority that during the closed season for training dogs, April 1 to August 20, it is unlawful to permit dogs to follow a trail laid by a drag, or to permit a dog to chase a led raccoon, except under proper field trial permit issued by the Game Commission for a fee of $5.00. Such field trial must be held under the immediate supervision of a representative of the Commission.

* * *

SALE OF DEER FAT

Q. Will you advise us whether we can contact anybody in your State who might be interested in selling us deer fat, sometimes known as deer tallow or deer grease?

E.J.V. & Co.—New York City.

A. The sale of fat taken from deer killed in a wild state in Pennsylvania is unlawful, for the reason that our Game Law forbids the sale of parts of any game killed under those conditions within the Commonwealth, except the skins of raccoons and bears. We have no knowledge of any source in the State from which you might legally purchase deer fat.

* * *

FLYING SQUIRRELS

Q. Can I get a permit to keep a flying squirrel?

G.L.H.—DuBois, Pa.

A. These animals have no protection in Pennsylvania and if you captured a flying squirrel legally under authority of a hunter's license, there is no objection to keeping it indefinitely in your possession without a permit of any kind. The burden of proof is upon you to show that this squirrel was lawfully taken, in the event you are questioned by a State Officer.

* * *

DEER HAIR FOR FISHING FLIES

Q. Is it legal to use deer hair in making fishing flies for sale? If not, can a permit be obtained?

J.T.R.—Mercer, Pa.

A. The answer to both questions is "No". Inasmuch as the present Game Law forbids the sale of any parts of deer killed in a wild state in Pennsylvania, the use of the hair of a deer so killed within the Commonwealth in making fishing flies for sale is contrary to law. If you desire to make artificial flies with deer hair for profit, it would be best to import the hair from another state or country. Under those conditions, you could legally sell the flies.

HOUSE IN TREE FOR DEER HUNTING

Q. Is it within the law to construct a shelter or house in a tree from which deer in season may be killed? I understand that no salt or bait can be used to attract the deer, but my idea, if permissible, is to command a better view of the surrounding country.

E.H.J.—Kane, Pa.

A. In our opinion it is unlawful to kill deer from a shelter or house constructed in a tree. While no objection has been raised by the Game Commission to a hunter climbing a tree for the purpose of killing a legal deer in season, except that the practice is exceedingly dangerous, we are of the opinion that to construct a shelter or blind in a tree for that purpose is in violation of Section 704 (a) of the Game Law which prohibits a hunter from taking advantage of any contrivance or device not specifically permitted by the Act.

* * *

DOGS FOR HUNTING SKUNKS AND WOODCHUCKS

Q. Is it permissible to hunt skunks with a dog now (April); and when can you train a dog for hunting woodchucks?

R.K.—Central City, Pa.

A. It is unlawful to hunt skunks with dogs during the period from April 1 to August 20, as this is the closed season for training dogs and the law forbids a dog owner to permit his dog to pursue any wild birds or wild animals during that period, except in certain counties open to fox hunting only. For the same reason, you may not train your dogs to pursue woodchucks until August 20. The groundhog season opens July 1, but until August 20 the groundhog hunter must confine his hunting to the use of a gun or other legal means, as he may not use his dog for such hunting until on and after August 20.

* * *

KILLING WOODCHUCKS FOR FARMERS

Q. I have been requested by several farmers to kill woodchucks in their fields. How may I legally kill them out of season?

Mrs.V.C—Corry, Pa.

A. Farmers do not have the right by law to give permission to kill groundhogs on their property to persons who do not reside on cultivated lands with them. Apparently you are not a resident of a cultivated area and in that case, it will be necessary for you to wait until the opening of the woodchuck season on July 1 to kill these animals for farmers requesting you to do so. Between July 1 and September 30 you may, with the specific permission of the farmer, dig woodchucks out of dens in their cultivated fields, provided the earth is immediately replaced and the dug-out area leveled off.

Photo by Anthony Skotak

Groundhogs must not be hunted with dogs until August 20th.

The Hungarian and Chukar Partridge

Photo by Eric J. Hasking, London, Eng.
Hungarian Partridge at nest.

(Continued from Page 3)

established on a sporting basis in Pennsylvania. It is, however, well realized that good shooting can be expected only in those few sections of the State which are primarily devoted to the production of small grains and that additional plantings either of wild-trapped or artificially reared birds may from time to time be necessary.

To state and federal administrators, as well as to research workers and sportsmen, the cost of establishing any exotic species is of particular interest. Fortunately, in the case of the Hun, Pennsylvania is in position to present accurate figures on the subject. Including the purchase of 1850 birds which were lost during a quarantine period in force during 1929, the total delivered cost of the thirty-one odd thousand wild-trapped birds was $124 545.76. Though accurate records are difficult to obtain, it is felt that $3.00 is a fair figure for the cost of raising one partridge on the State Game Farms. Thus, the expenditure involved in producing the 2,155 artificially reared birds was approximately $6,465. This means that the total cost of all birds utilized in the fifteen year stocking program was just under $131,000.00. Since little or no other money was spent directly and solely for the program, the sum stated may fairly be considered the cost establishing the species on a sporting basis.

At first glance the figures just presented may seem exceptionally high, but if additional data on the expenses involved in establishing the same and other species in various regions were available, it is entirely possible that the program might be shown to be comparatively inexpensive.

The Chukar Partridge

The Commission's first tests with the chukar partridge (*Caccibis chukar* sp.), were made in 1936 when 68 birds were liberated in Northwestern Pennsylvania. In that and the succeeding years a total of 2021 birds was released in carefully selected areas within the Commonwealth.

Some few of the birds were wild-trapped individuals secured from Indo China through the well known "Bring 'Em Back Alive" Frank Buck. The remainder were artificially propagated individuals of several different strains.

As a general rule, regardless of the time and place of release, the birds shortly dispersed in all directions, completely vanishing within a period of a few weeks. Several pairs of birds are known to have brought broods off the nest, but their ultimate fate is unknown. One bird, planted in the spring of 1937, is definitely known to have survived the winter immediately following. Shortly after it was turned out, this individual appeared at a farm roughly twenty miles from the point of release. There it "took up with" a flock of domestic turkeys on free range accompanying the latter during their daytime wanderings and roosting with them at night. Apparently, it suffered not at all from the winter extremes. In the spring of 1938, an additional 40 birds were turned loose at the place the one individual had wintered, but within one week all the flock, including the winter resident, had disappeared.

The only release which showed any particular promise of success was one made in the spring of 1939 on a high, rocky and comparatively barren mountain top in Northeastern Pennsylvania. It was there that the few broods of young previously mentioned were observed some months after the birds were liberated. In that place too the characteristic bowl-shaped "workings" hollowed in the snow and earth by the birds were frequently noted. It is from this habit that the chukar's scientific name is derived. Eventually, however, these individuals also disappeared.

Apparently all plantings made by the Commission have failed, while private efforts along the same lines have met with the same fate. In view of this fact, attempts to establish the species are being discontinued, though 500 birds now on hand will shortly be released in the wild because it has been impossible to dispose of them otherwise.

Since the majority of the birds stocked were raised incidental to the regular activities at the State Game Farms, no cost records are available. Thus, in this case, it is impossible to state the expenses incurred in the experiment.

Although the weather was extremely inclement, over fifty dogs and a gallery of about 100 persons turned out for the Annual Bucks-Montgomery County Coon Dog Trial on April 20. Following are the winners.

First Heat, first line—Rex, owned by E. Conrath, Fleetwood, Pa.; second line, Driver, owned by Behre & Deloughy, Madison, N. J.; Tree dog, Brownie, owned by Clewell, Allentown, Pa.

Second Heat, first line—Smokey Jack, owned by Smith & Thompson, New Jersey; second line, Driver, owned by M. G. Walters, Elkins Park, Pa.; Tree dog, Smokey Jack, owned by Smith & Thompson, New Jersey.

Third Heat, first line—Buster, owned by Bobby Hoffert, Hellertown, Pa.; second line, Bobby, owned by Bock & Kichline, Hellertown; Tree dog, Bobby, owneg by Edgar Walls, Millington, Md.

Fourth Heat, first line—Jumping Joe, owned by Behre & Deloughy, Madison, N. J.; second line, Trailer, owned by Robert Hoffert, Hellertown; Tree dog, Jumping Joe, owned by Behre & Deloughy, Madison, N. J.

Fifth Heat, first line—Jim, owned by E. Conrath, Fleetwood; second line, Jim, owned by O. Mixel, Allentown; Tree dog, Ben, owned by E. Conrath, Fleetwood.

Sixth Heat, first line—Ranger, owned by Robert Hoffert, Hellertown; second line, Wealthy, owned by Harvey Arnold, Allentown; Tree dog, Red Arrow, owned by Paul Schaffer, Allentown.

Seventh Heat, first line—Rowdy, owned by Behre & Deloughy, Madison, N. J.; second line, Buzzy, owned by Bock and Kichline, Hellertown; Tree dog, Buzzy, owned by Bock & Kichline, Hellertown.

The final line was won by Smoky Jack, owned by Smith & Thompson, New Jersey.

The final tree was won by Brownie, owned by Clewell, Allentown.

Fifteen wild-duck bootleggers and market hunters received a total of 44 months in jail and $125 in fines during the April session of Federal court at Sacramento, California, as game management agents of the Bureau of Biological Survey concluded an intensive drive on a Pacific Coast bootleg ring that sold wild ducks to night clubs and restaurants in San Francisco and Sacramento.

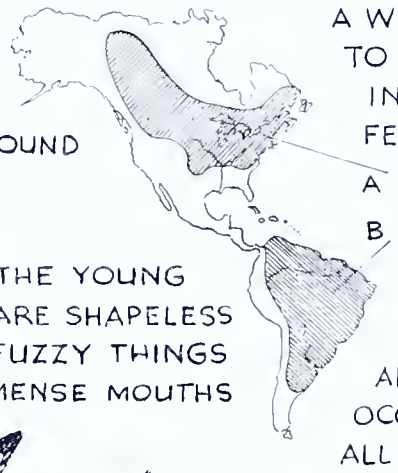
Game Protector Francis E. Jenkins, Lackawanna County, found a killdeer nest with four eggs on April 27.

THE NIGHTHAWK

IT IS ONE OF THE FEW NATIVE BIRDS THAT HAVE ADAPTED THEMSELVES TO CITY LIFE OFTEN NESTING ON GRAVEL ROOFS AND CINDER OR SLAG BANKS

LONG, STRONG WINGS AND A WIDE MOUTH ENABLE IT TO CAPTURE THE FLYING INSECTS ON WHICH IT FEEDS CHIEFLY AT NIGHT

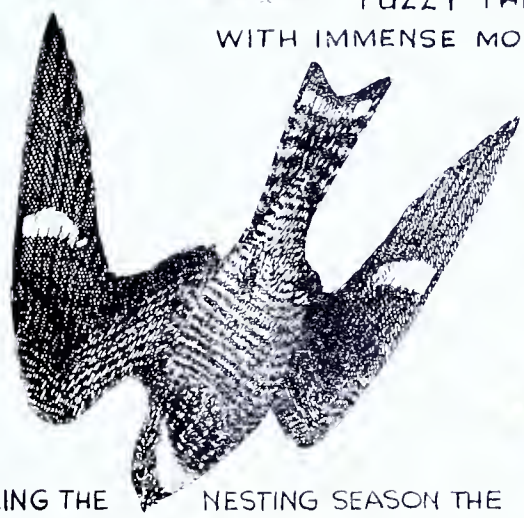
IT BUILDS NO NEST LAYING ITS TWO BROWN MOTTLED EGGS IN A SLIGHT HOLLOW IN THE GROUND



IT HAS ONE OF THE WIDEST RANGES OF ANY OF OUR LAND BIRDS OCCUPYING PRACTICALLY ALL OF NORTH AND SOUTH AMERICA

"A" SUMMER RANGE
"B" WINTER RANGE

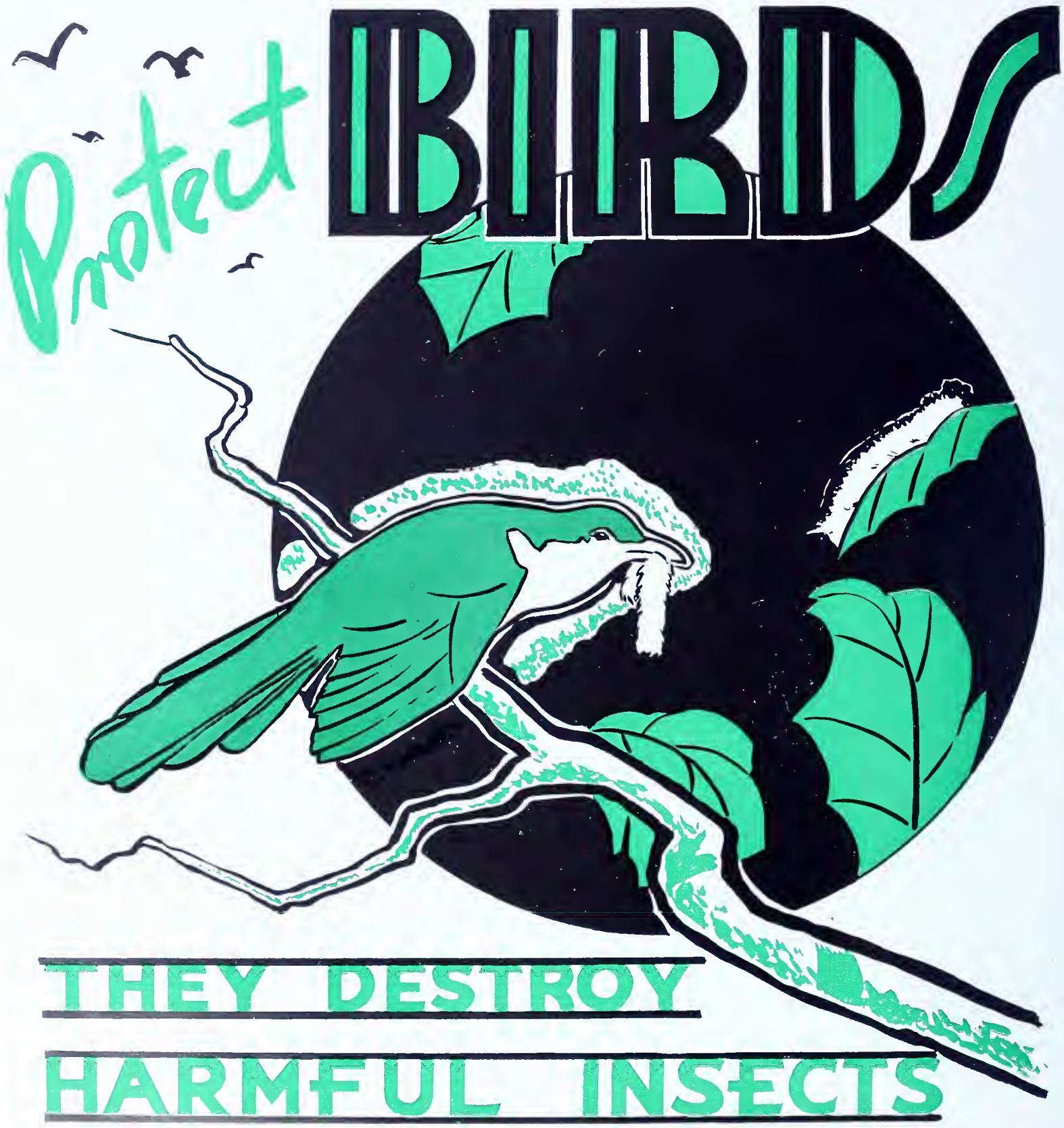
THE YOUNG ARE SHAPELESS FUZZY THINGS WITH IMMENSE MOUTHS



DURING THE NESTING SEASON THE MALES INDULGE IN A SPECTACULAR DISPLAY, DARTING DOWNWARD FROM A HEIGHT AND THEN SUDDENLY SWERVING UPWARD CAUSING A HOLLOW, BOOMING SOUND AS THE AIR RUSHES THROUGH THEIR WINGS

REALIZING ITS PROTECTIVE COLORING IT OFTEN SLEEPS ON A HORIZONTAL LIMB WHERE IT PERCHES LENGTHWISE LOOKING LIKE A KNOT OR SNAG

E.L. POOLE


Protect BIRDS
THEY DESTROY
HARMFUL INSECTS

PENNSYLVANIA GAME NEWS

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PENNSYLVANIA GAME NEWS

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Cover by
Jacob Bates Abbott

UNION LABEL 6

An Analysis of the Deer Problem

Rehabilitation of the forests to provide food and cover for the deer and other forest wildlife, cannot be satisfactorily accomplished unless the deer herd is considerably reduced first.

FOR reasons obvious to almost every sportsman who has hunted in the deer country during the past five years, but particularly to those who have tried during recent winters temporarily to relieve food conditions in the thickly forested areas of northern Pennsylvania, and to the farmer whose crops are being destroyed by deer because of the lack of their normal forest foods, the Game Commission in the interest of good game management, as well as from a humanitarian standpoint, has taken under advisement the declaration of a state-wide open season on antlerless deer next fall, with no open season for antlered bucks.

At an extended weekend conference on June 8 and 9, the Commission and its field and office staffs discussed at length the status of its current state-wide food and cover development activities and the prospective game supply for this fall. Many disturbing conditions were reported.

The Commission's land management responsibilities have tripled during the past decade, and it is now spending more of the sportsmen's money for the management and improvement of the lands under its jurisdiction than ever before to assure a maximum annual crop of wildlife on those lands. In this work various relief agencies, such as the C.C.C., W.P.A., D.P.A., and N.Y.A. and other groups, have been most helpful.

Even though a comprehensive long-term program of rehabilitation of our game habitats is well underway, it is evident that in certain large wooded portions of the Commonwealth the Commission's efforts have been nullified by the big deer herd. Field officers report that in the deer country from 75% to 90% of the many thousands of trees, shrubs, and food plots planted by the Commission were destroyed by deer, and that planting grain plots to furnish food for small game and to relieve damage to neighboring farms is of little value wherever deer are plentiful

Reports also indicate that slightly over 9,000 deer starved this past winter; that in one of our large northern field administrative divisions where there are still too many deer such losses exceeded 6,000 animals—two-thirds of the total for the State—in spite of the extensive browse cutting programs conducted by the Commission and interested sportsmen. Elsewhere, except in badly over-browsed areas, the estimated losses were small. In counties immediately adjacent to the region just mentioned, where comparatible deer populations existed prior to 1938 when more than 170,000 antlerless deer were removed in a statewide season, and where antlerless deer were again legal for part of the 1939 season, the losses from starvation during the past winter were nil. This, generally speaking, proves conclusively that winter and early spring starvation was confined to areas which are over-populated.

Deer damage complaints from farmers in many counties this spring also are distressing and relief will have to be given those adjacent to woodland areas or their crops will be ruined. The Commission, in analyzing the food and cover program in relation to the deer herd, now recognizes that where food is scarce for deer, food and cover are also scarce for small forest game, including grouse, varying hares, cottontail rabbits, and in some counties wild turkeys. Consequently, such game is not thriving in many sections because the undergrowth, including such choice bear and grouse foods as devil's club, sumac, and blackberry briars, has been destroyed. In a number of such counties our field officers believe it would be the part of wisdom to allow no hunting for such forest-loving species as those above named this year. One of the problems which is giving the Commission considerable concern is how to prevent like destruction of fine small game habitats in other regions.

The Commission's field and office staffs are of the opinion that to open limited areas to antlerless deer, as was done in 1939, is unwise because it concentrates hunters, increases the danger to human life, and causes needless confusion and difficulty. They believe that the more sensible plan is to reverse statewide seasons as needed, say on alternate years, or once in every three years.

Except where deer have destroyed food and cover, the prospects for the small game hunting season this fall are satisfactory, and present indications are that the Commission can be fully as liberal in its hunting season regulations this fall as it was a year ago. The Commission has scheduled a meeting on July 11 to decide upon seasons, bag limits, and other regulations, at which time these several matters will be carefully considered. Present indications are that the small game season will probably open on November 1; the bear season November 18; and the deer season on Monday, December 2.

A Woodland Pond

G. NORMAN WILKINSON, JR.

The quiet of evening is settling down
As o'er the pond there runs a frown
Of rippling waves, as the soft breeze sighing
Pauses to listen to the pied-billed's crying.
He sounds like a hound on a far away trail
And occasionally a loon will add his wail.

Thus I sit and listen to woodland voices
Many are familiar, others strange noises;
The red-wing's songs or continuous scolding
Make a sudden stillness when they are withholding
From the silent shadow which sails on high,
A lofty broad-wing with a very sharp eye.

This danger passes and what should I see
But a swimming muskrat with the branch of a tree.
He maneuvers it well thru brush, around stump,
And deposits it with others on a small hump.
This strange looking pile being built like a dome
Will soon become the furred-ones home.

A fat gray squirrel approaches on her way to an elm tree
To gather more bark strips for the nest I can see.
Hello! They're two red squirrels now in the basswood
Cutting and pealing red buds that must taste good.
For they're stuffing themselves till white stomachs stick out
Or an eagle swings closer and puts them to route.

The croak of bullfrogs in the skunk cabbage plants
Is suddenly stilled by the whistle of wings,
As out of the sunset a swift flyer shouts;
A beautiful wood duck, to his mate he brings
News of a nest site in distant hollow apple
And they talk it all over as they preen and dapple.

Small wonder men seek the quiet forest to think,
For here may be found the lessons that link
Human lives a bit closer to God's plan of love
By making us realize His power from above.
For observing natures' children in part or the whole
We find that men only are endowed with a soul.

Written from actual observations on a small pond in Mass., June 1938.

THE GAME COMMISSION IMPROVES ITS LAND HOLDINGS

By ROSS L. LEFFLER

★

EACH year more than 650,000 licensed hunters in Pennsylvania invade the woods and fields in pursuit of wildlife. The annual "bag" of this large army of sportsmen amounts to an average of between five and seven million pieces of game, weighing a total of from six thousand to twelve thousand tons.

One of the natural questions to be asked by sportsmen is: what is our Game Commission doing to maintain this supply of wildlife, and what is it doing to provide the great army of hunters with a place on which to enjoy their sport?

Good hunting and a place on which to hunt are of course the dream of every sportsman. They have been the subject of many thousand words, both written and oral. Each individual hunter and sportsman has his own solution to the main problems of wildlife conservation. They have likewise been the reason for many State and National conferences, all designed to improve this popular outdoor sport.

The aim of the Game Commission is to continue to provide the sportsmen of Pennsylvania with good hunting. It must be remembered that this is no small job. The problems facing those responsible for maintaining wildlife supplies are greater now than at any time since their conservation became a matter for serious consideration.

There are, of course, many essential requirements for the maintenance of a supply of game birds or animals on an area. Indeed, to outline the Commission's activities in all of the various fields, and show the results, would take too long and make a story too voluminous for this magazine. The present writing, therefore, will be confined to the Commission's activities in providing more places to hunt and what has been done in assisting nature toward what might be called natural propagation, or improving living conditions for wildlife, on Commission-controlled areas so that wildlife can propagate and increase to the maximum under natural conditions. This article will be in part a report of the activities of the Commission's Division of Game Land Management for the two years ending May 31, 1940.

Land Holdings Grouped For Management

The Commission's direct land management responsibilities now covers nearly 1,000,000 acres, with more than 630,000 acres of State Game Lands (owned by the Game Commission), 1,191 Refuges, 75 Wild Propagating Areas, (exclusive of 14 Wild Turkey Propagating Areas), 84 Cooperative Farm-Game Projects comprising more than 135,000 acres, 4 Dog Training Preserves, and 2 Archery Preserves, wherein hunting by bow and arrow only is permitted.

The various land and refuge units in the State have been divided into 44 separate groups for purposes of maintenance and management. Each group is in charge of a Land Management Protector whose duties it is to carry on maintenance and improvements of the lands in his group. Five trained Game Land Technicians, whose duties are to plan and coordinate management and development on State Game Lands and Game Refuges, are also working under the guidance of the Division.

Expansion and Improvement of Refuge System

During the past two years a total of 65 small Primary and Auxiliary Refuges were established and a few of the larger old Refuges were reduced in size, with some smaller ones established in the same general territory for the purpose of giving more protection, and to a larger variety of wildlife.

Twenty-five new Wild Propagating Areas from which wild game is transferred for restocking in other locations were added during the biennium. An additional 48 Cooperative Farm-Game Projects, with 428 new Refuge units and over 1,100 Safety Zones, were set up and posted. Two additional Bird Dog Training Areas were established.

Our land units require maintaining approximately 1,600 miles of wire line around Refuges, Propagating Areas, and Special Preserves. Each year these lines are mowed, signs and posters renewed, and new wire put up as needed. Nearly 3,000 miles of outside boundary line of State Game Lands must be maintained. These lines are kept tagged and painted, while some are brushed out regularly for fire protection. Several hundred miles of trails and roads are maintained for administration and protection. These are useful in protecting the areas from fire, in getting feed and salt into the mountains, in handling the utilization problems; moreover, they serve as valuable openings for wildlife. It is also necessary in many cases to maintain telephone lines to Game Land Managers' headquarters where commercial lines are some distance away. The maintenance of the 84 Cooperative Farm-Game Projects requires posting and then taking down each year Safety Zone posters from around more than 1,600 Safety Zone areas, the repairs and maintenance of the lines around 880 Refuge units, the patrolling of the areas, and preparations for a supply of food for wildlife.

The Commission owns twenty-five regular Game Land Managers' headquarters, as well as buildings at four State Game Farms, which are maintained and improved from time to time, also several buildings used as temporary headquarters. During the biennium the headquarters of the Game Land Manager at the Pymatuning Refuge, as well as the Museum Building and Service Buildings at this area, were completed. In addition to these buildings, two major remodeling jobs were made, one at the headquarters of Group 1, Mount Gretna, Lebanon County, and the other at the headquarters of Group 21, near Rainsburg, Bedford County. Considerable work was required at other headquarters in improving and keeping them in good condition.

Pymatuning Museum and Refuge

The Pymatuning Wild Waterfowl Museum, completed in the Fall of 1938, has proven to be one of the biggest attractions under the control of the Game Commission. It is located on Ford Island about one mile south of Linesville on the western edge of the Pymatuning Refuge, close to the now famous site where the "ducks walk on the fish". The building is 88' x 22' with an exhibit room 50' x 22'. Considerable landscaping has been done on Ford Island in the area surrounding the museum, using for the most part those shrubs and vines which provide cover and food for wildlife. A parking area for approximately 200 cars has been completed and from it gravel walks lead to the museum and other points of interest on the island. It is being maintained by the Game Commission

(Please turn Page)

HIGHLIGHTS OF MR. LEFFLER'S ARTICLE

Annual bag of more than 650,000 licensed hunters in Pennsylvania is approximately five to seven million pieces of game amounting to 6,000 to 12,000 tons.

Game Commission controls almost one million acres of land.636,680 acres owned by Commission, (3,000 miles outside boundary line) including almost 1,200 refuges, (1,600 miles of wire line), 75 propagating areas, 84 Farm-Game projects comprising 135,551 acres with 1,656 safety zones, and 880 refuge units. Lands and Refuges in 44 groups for management. Commission owns 25 headquarters for Game Land Managers.

PYMATUNING MUSEUM AND REFUGE

2,500 people visit Pymatuning Museum weekly.

Museum contains 232 mounted specimens of 53 different species of waterfowl and shore birds.

Refuge comprises 3,670 acres (2,500 water and 1,170 land and marsh).

15,000 to 20,000 waterfowl can be observed in summer at the Refuge.

75,000 waterfowl observed in one day during migration.

Approximately 500,000 migratory waterfowl used Refuge during past two years to feed and rest.

75 acres grain planted—25 acres left standing in fields.

726,000 waterfowl food plants, 10,000 bulbs, 2,000 roots and several hundred pounds of seeds and seed spores planted in refuge and main dam.

GAME FOOD AND COVER PLANTINGS ON GAME LANDS AND REFUGES

4,500,000 trees, shrubs, vines and cuttings planted.

Thousands of feeding shelters, retreats, etc., were constructed.

16 tons of Pennsylvania Game Food Plot Mixture planted, largely by sportsmen.

700 game food plots (grain) over 600 acres planted each year.

Release cuttings and thinnings made on thousands of acres. $14,000 received from the sale of wood.

Several hundred pounds of seeds collected by NYA for nursery planting.

35,000 wild apple trees pruned and 300 tons apple pomace distributed for game food.

95,000 copies Bulletin 16, "Wildlife in the Farm Program", printed and distributed.

20,000 copies Bulletin 11, "More Food for Upland Game", printed and distributed.

RELIEF LABOR

59 WPA projects completed in two years.

34 WPA projects now operating employing between 1,400 and 1,800 men daily.

35 WPA projects applied for.

Many NYA projects approved for work on State Game Lands and Game Refuges.

18,000 man hours of labor furnished by DPA.

Two CCC Camps located on Game Lands doing development and maintenance work.

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* President of the Commission.

The Pymatuning Waterfowl Museum is one of the Game Commission's biggest attractions.

to display mounted specimens of wild waterfowl, shore, and other migratory birds that visit the Pymatuning region, and is open to the public from May 1 to November 30. The Museum has proven valuable to sportsmen, naturalists, and the general public, an average of 2,500 persons visiting it weekly. More than fifty school groups visit the area each summer. Interested persons have an opportunity to gain first-hand knowledge of many of our most beautiful migratory waterfowl, including some species rarely seen in this region. The Museum now contains 53 migratory waterfowl and shore bird species, with a total of 232 specimens, all of which were collected on the area, including the rare great white heron. The specimens are expertly mounted and attractively displayed in glass cases.

A large part of the Migratory Waterfowl Refuge, which contains 3,670 acres (2,500 water and 1,170 land and marsh), can be seen from the terrace at the Museum. During the migration large flocks of waterfowl can be observed resting on the Refuge area within sight of the Museum.

Each year the number of waterfowl that nest and rear their young on the Refuge increases, and with each increase there have been several new species noted. During recent nesting seasons the following birds were observed nesting in varying numbers: pied-billed grebe, black tern, mallard duck, black duck, blue-winged teal, gadwall, shoveller, pin-tail, ring-necked duck, redhead, ruddy duck, baldpate, American bittern, least bittern, great blue heron,, green heron, black-crowned night heron, king rail, Wilson's snipe, sora rail, Florida gallinule, American coot, woodcock, killdeer, semi-palmated plover, woodduck, bald eagle, and Canada goose. The redhead and ring-necked ducks were newcomers to this vicinity in the 1937 season and the baldpate in 1938, and were totally unexpected. Ordinarily nesting in Central Canada and North Central United States, their presence indicates that the refuge has been developed into an excellent nesting place and that it will be used more extensively each year. The horned grebe, common tern, Virginia rail, black rail, Northern phalarope, and many others were also present during the nesting season but no nests were found. Twenty bald eagles were observed on one day and a few days later 57 American egrets were counted on their roosts. During the summer months between 15,000 and 20,000 waterfowl can be observed on the area, most of which are raised in the refuge. Thousands of ducks and geese stop over during their migrations to feed and rest. As many as 70,000 wild waterfowl have been present on a single day during the migrating seasons. It is estimated that 500,000 migratory waterfowl used the area during the biennium.

In addition to the wild waterfowl and shore birds, there are also a number of ringneck pheasants, quail and ruffed grouse in the fields and woods along the shore in the refuge area. It has been possible to trap a large number of rabbits and ringneck pheasants from this area during the past few years for restocking purposes in other sections.

Development work has been pursued on both the land and in the water areas of the Refuge, as a result of which it has become one of the finest waterfowl resting, nesting and feeding areas in the east. Each year approximately 75 acres of grain are planted, and from this about 1,000 bushels are harvested for feeding waterfowl during migrations and for winter feeding of wildlife in northwestern Pennsylvania. About 25 acres of grain are also left standing as food for waterfowl. More than 78,000 shrubs, vines and trees were planted by the WPA, using primarily those species which will furnish wildlife food and cover. Approximately one-fourth of these seedlings were transferred from other areas in the vicinity.

During the biennium a great many different aquatic plants which provide wild waterfowl food were planted on the Refuge and in the main dam, practically all of which were gathered from other water areas nearby with no cost to the sportsmen except transportation and supervision of lifting and planting. A total of more than 726,000 plants, 10,000 bulbs, 2,000 roots and several hundred pounds of seed and seed spores were planted. Labor was provided through the cooperation of the WPA.

Game Food and Cover

The game food and cover development program was expanded extensively during the past two years. In order to provide better cover for wildlife a total of more than 2,500,000 evergreen seedlings were planted, mostly in clumps or strips. These seedlings were all received through the cooperation of the Department of Forests and Waters, and without any charge except transportation. They were planted only on State Game Lands and Game Refuges. Over 1,600,000 shrubs and vines which produce much-needed game food were planted. A large part of these were received through the courtesy of the U. S. Soil Conservation Service without cost the remainder being raised in the Game Commission's nursery and in State Forest nurseries. Thousands of additional shrubs and vines, which otherwise would have been

Many miles of worm fences have been built on Game Lands to break up larger areas and provide travel lanes for Wildlife.

destroyed, were transferred locally to the State Game Lands, and more than 200,000 cuttings of game food plants were also set out. Most of this work was done largely with the assistance of WPA and NYA.

Approximately 27 miles of worm fence, used by wildlife as travel lanes, and erected to break up into smaller units the larger open fields, were built by WPA. Shrubs and vines were planted alongside of them. The result should be an increased carrying capacity for wildlife. Thousands of feeding shelters and other artificial shelters and retreats were constructed in sections where natural cover was deficient and where it will take some time to produce cover naturally.

Each year during the biennium, arrangements were made, after receiving bids, to make up the Pennsylvania Game Food Plot Mixture. More than 16 tons of this have been planted in the two years, the greater percentage of it planted by sportsmen. An additional several tons were also sold outside of Pennsylvania. *Each year* about 700 game food plots, with an area of over 600 acres, were planted with various kinds of grains on State Game Lands and Refuges.

Arrangements were made *each year* for planting approximately 500 acres of State Game Lands by neighboring farmers on a share basis. Besides the material left standing for game food, the Commission also receives annually for its share about 4,000 bushels of grain used for winter feeding. In addition there were also raised at Pymatuning and on other Game Lands approximately 4,000 bushels which were harvested, and then used in the neighboring counties for winter feeding.

Extensive cutting operations on forest areas were carried on and many encouraging reports of the benefits to wildlife of these cuttings have been received from field men. Release cuttings and thinnings were made on many thousands of acres, mostly with the help of WPA, CCC, and NYA. Wood sales were made wherever possible, netting during the biennium almost $14,000.

The Museum grounds have been beautifully landscaped and otherwise made appealing to visitors.

With relief help approximately 35,000 wild apple trees were pruned and where necessary released from competitive growth, the pruned branches being piled as food for rabbits and deer. Here it should be noted that apples furnish food for practically all kinds of wildlife. This pruning and releasing from suppression increased the fruiting capacity of the apple trees.

In the Fall of 1939, for the first time, a special effort was made to have apple pomace from cider mills hauled to the woods and placed in large piles for feed. More than 300 tons were distributed by our personnel and by sportsmen. Observations disclosed that the pomace was eaten extensively by deer, rabbits, grouse, wild turkeys, squirrels, and that even bears visited the piles. Upon analysis such pressed apples were found to compare very favorably with acorns in food value.

In order to assist those who are interested in improving wildlife habitat, the Division of Game Land Management during the summer of 1938 prepared Bulletin No. 16, entitled *Wildlife in the Farm Program*. The demand for this bulletin has been so great that four printings, totalling 95,000 copies, were printed and distributed. Bulletin No. 11, *More Food for Upland Game*, was reprinted twice in the same period.

WPA, DPA, CCC, NYA

Advantage was taken of the various relief agencies to accomplish for sportsmen as much as possible in land and refuge improvements at a minimum of cost. About 59 WPA projects were completed during the biennium. Much good was accomplished, including planting and transplanting trees and shrubs; clearing, grubbing and planting food plots; pruning apple trees; building feeding shelters and other artificial shelters and retreats; erecting fences; repairing springs; constructing trails; building roads; establishing Game Refuges; building corn cribs for storage of grain for winter feeding; doing stream improvement, cutting out and marking boundary lines; and many other useful jobs.

There were at the end of May, 1940, 34 active WPA projects employing a daily total of between 1400 and 1800 men. Applications were submitted for 35 additional projects, some of which have been approved. Many of the applications are renewals of continuations of present projects. Likewise many NYA projects were operated continuously doing somewhat the same kind of work as WPA. In addition to this NYA collected several hundred pounds of seed for nursery planting in order to produce game-food-bearing shrubs and vines. During the Legislative Session of 1939 an act was passed requiring those on direct relief to work for grants wherever physically able, and where useful projects could be found. The Game Commission provided a number of such projects, and for these activities the Department of Public Assistance furnished more than 18,000 man-hours of labor. The Commission still has two CCC Camps, these being situated on two of the larger tracts of State Game Lands. These are being developed in the best possible manner for wildlife and for timber production.

Cooperative Farm-Game Projects

In an effort to work out a plan whereby more posted land would be opened to hunt-

(Continued on Page 26)

Worm fences are planted to many kinds of trees and shrubs which subsequently provide much food and cover for both wildlife and song birds.

What Johnny Appleseed

By James N. Morton

Johnny Appleseed

THE common apple is grown throughout the United States. It is probably the leading commercial fruit of the country, with a crop of about 125,000,000 bushels sold annually, many thousand bushels of which are exported. North America is the leading apple growing country of the world. Pennsylvania ranked fifth among the states in the apple crop produced in the United States in 1939.

A native of southwestern Asia, the apple has been cultivated since time immemorial. Charred seeds and cores have been found in prehistoric lake dwellings of the region now Switzerland. Crab apples were growing in the United States before the advent of the white man. But the common apple was introduced into America by the early colonists about 1630, when some seeds and a few trees were brought from Europe by the Massachusetts Colony. It was first grafted on wild stock and cultivated about 1647 in Virginia. Its early popularity and value is attested to by the fact that Governor Endicott of Boston traded 500 three-year-old apple trees for 250 acres of land in 1648.

J. Russell Smith in *Men and Resources* gives the following interesting account of the history of the apple industry: "There is at least one fertile ridge, however, that is second to no other part of the valley. This low ridge, called Apple Pie Ridge, runs about 20 miles northeastward from Winchester, Virginia. Here the apple business got started, and on this ridge you may travel for miles past apple orchards, beautiful in spring with blossoms and in autumn with red and ripe fruit. Hundreds of men and boys pick and haul apples to the town and railroad stations, of Martinsburg and Winchester, where there are large packing houses and storage plants."

The rapid spread of the apple tree in this country is credited largely to one of our oddest pioneer heroes, Jonathan Chapman, who was born about 1776. Chapman is the semi-legendary "Johnny Appleseed," who first appeared in the upper Ohio valley when about 25 years of age. Unlike most of the pioneers and frontiersmen of the time, he carried no musket or powder horn. His baggage consisted of a hoe and several gunny sacks filled with apple seeds, borne on a pack horse.

In one clearing after another he planted these seeds in order that children of the pioneers would be able to procure fresh fruit as a protection against scurvy. He planted seeds all summer long, going from place to place; and in the fall, when the bags were empty, he traveled back to the cider mills of Pennsylvania, where he collected more seed preparatory to the return journey the next spring to extend his planting. For upwards of fifty years until he died, in 1848, Johnny Appleseed continued planting apple seeds gathered from the cider mills. At first people considered him eccentric, and an object for ridicule, but when throughout the entire Ohio Valley the trees began to bear fruit, people blessed him as a benefactor. There was ample reason for this, because by 1838 in evidence of his foresight orchards in more than 100,000 square miles of the Middle West hung heavy with luscious fruit.

While we recognize the services to mankind of Johnny Appleseed and the many Johnny Appleseeds of lesser renown, many times we overlook the benefits wildlife derived from those early pioneers who spread the apple tree over such a wide territory. Practically all kinds of wildlife feed on the buds, bark, fruit and seeds of the apple tree. Grouse are fond of the buds, rabbits feed on the bark, deer eat the twigs, and pheasants, quail, grouse, bears and other wildlife find the fruit and seeds palatable. The crabapple likewise is valuable as food for wildlife and many of them are planted on the State Game Lands to increase the food supply.

A surprisingly large number of apple trees can be found in groups or singly, growing wild in the forest areas of Pennsylvania, especially along old lumbering roads, tramways, around lumber camp sites, and other places where they have persisted for many years after having originated from seeds of apples brought in by the early timber cutters. The Game Commission, with the help of WPA, NYA, and CCC have located thousands of these trees, pruned them, and released them from the suppression of competing forest growth. The result has been a greatly increased fruit production, hence an increase in valuable wildlife food supplies. The pruned branches are placed in small piles near the trees where rabbits

Apple Pomace from Cider Mills is used extensively by Wildlife when hauled to the woods and thrown on piles.

Did for Wildlife

Distributing cull apples on Game Lands.

nd deer feed extensively on the twigs and bark during winter nonths.

Another source of food for wildlife from apples, one which had een overlooked until recently, is apple pomace from cider mills. n most cases the disposal of apple pomace becomes quite a problem t the different cider presses. The pomace is generally dumped n huge piles near the press and left there to rot. Experience of eld men in the Game Commission during the past few years has hown that these pressed apples, when hauled to the woods and hrown on piles, have been used extensively by wildlife. It likeise was found that where pomace was hauled away from the ider mills and scattered, thickets of young apple trees often esulted. Realizing that the material was a valuable source of food or wildlife, the Game Commission made a determined effort during he fall of 1939 to have these pressed apples hauled to the woods nd placed on piles for game food. With the cooperation of many portsmen's groups and other interested individuals, field men f the Commission distributed at least 300 tons of pomace during he fall of 1939. A close check was kept on these piles and it was ound that the material was eaten by deer, rabbits, wild turkeys, quirrels, and grouse; and that even bears visited the spots where was placed. Deer pawed holes in the frozen mass to eat it. In early all cases the piles were completely used up. Any seeds hich remain will probably germinate, thereby providing seedlings hich can be transplanted to desirable locations in forest areas.

Through the cooperation of the Pennsylvania Department of griculture, an analysis was made of this material as taken from he woods. It showed a water content of 76.93%; ash, 0.49%; protein, .88%; fat, 1.62%; fiber, 4.69%; and nitrogen free extract 14.39%. his indicates that in value as game food apple pomace compares avorably with acorns.

In the State of Washington, which ranks first among all states n apple production, dairymen in the vicinity of factories producing pple pomace have fed this material to their cows with very good esults. The pomace is stored in silos, bins or piles where it is ept for several months with little loss from spoilage except the uter part, to which air has access. When stored in piles, a thin yer spoils on the outside of the piles, forming a crust that tends exclude air from the interior, thus preserving all but a few nches of the heap. Various experiments in the State of Washngton have shown that apple pomace is approximately equal to ood corn silage in feeding value for dairy cows. In digestion xperiments, the dry matter of the dried apple pomace proved to e 72% digestible. In feeding experiments with milking cows, ried apple pomace was soaked with water and fed for comparison ith soaked beet pulp. The cows, when fed apple pomace, produced pproximately 93.5% as much milk as when fed beet pulp.

JOHNNY APPLESEED

Pioneer of the pioneers,
Johnny Appleseed,
Blazing the trail without axe or gun,
Planting his apple seeds one by one,
Kindly service for others done,
Cheering for them, the barren years,
Johnny Appleseed.
Ever a friend to his fellow men,
Johnny Appleseed
Knowing that apple trees must bloom
Ere the new land would be a home
For the weary traveler yet to come.
Wisdom was his, beyond our ken,
Johnny Appleseed.

Hero, too, though in beggar's dress,
Johnny Appleseed.
When on the warpath, the braves were led,
When on the hatchet the blood was red,
Warning the settlers, for days he sped,
Paul Revere of the wilderness,
Johnny Appleseed.
Gone is that quaint unselfish man,
Johnny Appleseed.
Work of his hands we still may see—
Every blossoming apple tree
Is a monument to his memory.
Part of an obscure, infinite plan
Was Johnny Appleseed.

—Norma Gilmer McCormick,
R. R. 2, Ada, Ohio.

Hundreds of tons of apple pomace are produced at cider mills in Pennsylvania each year. As a general rule this is not used, and many cider mill owners are glad to have it hauled away. Here is an opportunity for those interested in wildlife to do a good turn. For they can arrange to have this material hauled to the woods and placed on piles for winter food. By transporting it before surface conditions become bad, old woods roads can be utilized, and the pomace hauled a considerable distance in the forests. *Distance should be achieved so that wildlife will not be attracted too close to main-traveled roads to become a prey of fast-moving automobiles.* Here is an opportunity for everyone interested in wildlife to constitute himself a modern Johnny Appleseed, and to go the original pioneer hero one better: he can take the pressed apples along with the seeds back into sections where hungry and helpless creatures of the forest can benefit from this otherwise waste material. Johnny Appleseed helped both humanity and wildlife by spreading rapidly the trees which produced this luscious fruit. So far as wildlife is concerned we can continue the good he commenced by taking pressed apples from cider mills and cull apples discarded by orchardists to within reach of our dependent wildlife creatures.

This pile of Pomace has been used extensively by deer as evidenced by the many tracks surrounding it.

Phenology » » an Aid to Wildlife Management

By Douglas Wade

PHENOLOGY, or aspection, has to do with the visible evidence of the responses which plants and animals make to the changing of the seasons. All of us engage in phenological observations more or less haphazardly — especially during the spring months when many plants are flowering.

Long before the establishment of weather stations, people, particularly those who dealt with planting occupations and fishing, relied upon phenological phenomena to guide them. With a little thought we can recall many of these *indicator signs*. Many more signs, now abandoned, may be found in the literature of this Nation. In the Middlewest, potatoes were planted only after the burr oaks had flowered. In the Eastern states, the flowering of the mayapple indicated the proper time to plant Indian corn, potatoes, sweet potatoes, melons, pumpkins, and French beans. Peas, beans, radishes, carrots, cabbages, lettuce and onions were planted about the time the barn swallow and the little bank swallow made their appearances. Oats were sown soon after strawberries came into bloom. Fishermen along the Delaware, Schuylkill, and other nearby rivers, would start to hook and net shad about the time the alders were in bloom. Sturgeons would begin to be seen jumping out of the water at the time Dutchmens' Breeches were blooming.

Today, these signs still mean much to farmers, apiarists, cattlemen, fishermen, foresters, nurserymen, and wildlife workers. The fly fishermen know when to start using certain favorite flies only after seeing certain insects in flight. On the cattle range of the west, particularly the mountain ranges, the appearance of key plants determines the time to turn cattle out for forage. It was so important to learn more exactly the proper periods when to turn cattle onto ranges under the supervision of the United State Forest Service, that this service undertook a ten year study of weather and plant-development on its ranges. The results of their studies have been made available in Technical Bulletin No. 686, U. S. Dept. of Agriculture.

The science of phenology was started by famed European botanist, Linnaeus, toward the middle of the 18th century. Other Europeans, particularly the Belgians, gave form to the science and by 1915 many societies were in existence in Europe to study phenology. In the United States, with one or two exceptions, only desultory attempts have been made to establish any extensive system of collecting phenological observations.

A calendar of the leafing, flowering, and seeding of the common trees of the Eastern United States was prepared by George N. Lamb in 1914 and published in the *Monthly Weather Reviews*, Supplement No. 2, 1915. Lamb wrote the following comments about the value of tree calendars:

"In forestry these data (leafing, flowering, and seeding) are valuable. Proper methods of cutting are often dependent upon an accurate knowledge of the time of seed ripening or seed dissemination. One of the problems of forest management is to harvest trees in such a way that another desirable crop will take the place of the old one. In accomplishing this, the best method is often by natural reproduction. To secure such reproduction it is essential that the forester be familiar with the life habits of all the trees and shrubs of the forest. It is largely by knowing these habits and controlling them that he can expect to secure the establishment of a new growth." Lamb furthermore points out that his tree calendar is invaluable to seed collectors and is helpful in determining the time of year when to plant seeds. Botanists, plant collectors, and ecologists need accurate date on the life history of plants. "The plant pathologist is constantly in need of accurate information on the date of the performance of these functions of the trees in order that he may fully understand the life history of injurious parasitic organisms and also ascertain the most favorable time and means for their suppression."

Lamb even considered the value of phenology in training school children to make careful scientific observations. The very making of these observations should open up much of the plant and animal world to many children. At least, as Lamb wrote, it would "change the monotonous journey between the home and school into a voyage of discovery."

In recent years even wildlife workers have felt the need for accurate aspectional data. Aldo Leopold describes some of the wildlife worker's needs:

"Measurements of game phenomena (such as hatching dates, for example) are sometimes so difficult to secure that several years' observations must accumulate before there are enough data to justify a conclusion. If in compiling the data the several years be arbitrarily lumped by calendar dates, an error may be introduced because certain years were abnormally late or early in their weather, and hence in the seasonal progression of their phenomena.

"Game dates for such abnormal seasons may be adjusted to normal if the observer has taken the precaution to keep a cumulative record of the dates of typical seasonal phenomena. Such a record is called a phenological table. Dates of first leafing, flowering, fruiting, sex-calls, pairing, egg-laying, hatching, etc., are good items for such a table."

A scientist in Ohio, Arthur B. Williams, has given another interpretation to phenology or aspection. He writes, "The fundamental difference between plants and animals is, of course, that plants manufacture their own foods out of elemental substances, while animals do not, but must in the last analysis depend upon the products of plants for their supplies of food. Seasonal behavior on the part of the animal population of a biotic community is thus closely correlated with seasonal changes in plant activities. Aspection, from the standpoint of the animal population is but a shifting of food supplies—a sort of clearing and resetting of the table. On the other hand, in their search for and gathering of food, and through other activities, animals in turn affect plants in various ways."

The present program of the Pennsylvania Game Commission is in many respects highly benefited by phenology and as this science becomes more developed the benefits will be farther reaching. For example, the wild turkey program calls for the collecting of eggs from wild propagating areas. At the present time it is fairly well known when turkeys lay their eggs, but this knowledge would be more complete if sufficient correlating phenological evidence were at hand.

Since phenological studies are so generally valuable to many fields of endeavor, it seems urgent to set up in this country an extensive and sustained system of recording and disseminating phenological data. Logically, this system should be established in conjunction with the United States Weather Bureau. It is not probable, however, that this will occur before some time. Hence it is important that at the present individuals, or better yet, learned societies undertake the gathering and compilation of phenological data. In Pennsylvania, the American Philosophical Society has recently initiated a study of the flowering, leafing, pollen shedding, and fruit maturing of common wildflowers. This study is more or less unique in that its success is dependent upon the cooperation of many qualified amateurs. Ability to properly iden-

(Continued on Page 30)

THEN AND NOW

This month the GAME NEWS is starting a "Then and Now" page, in order to stimulate additional interest in wildlife among the boys and girls of Pennsylvania.

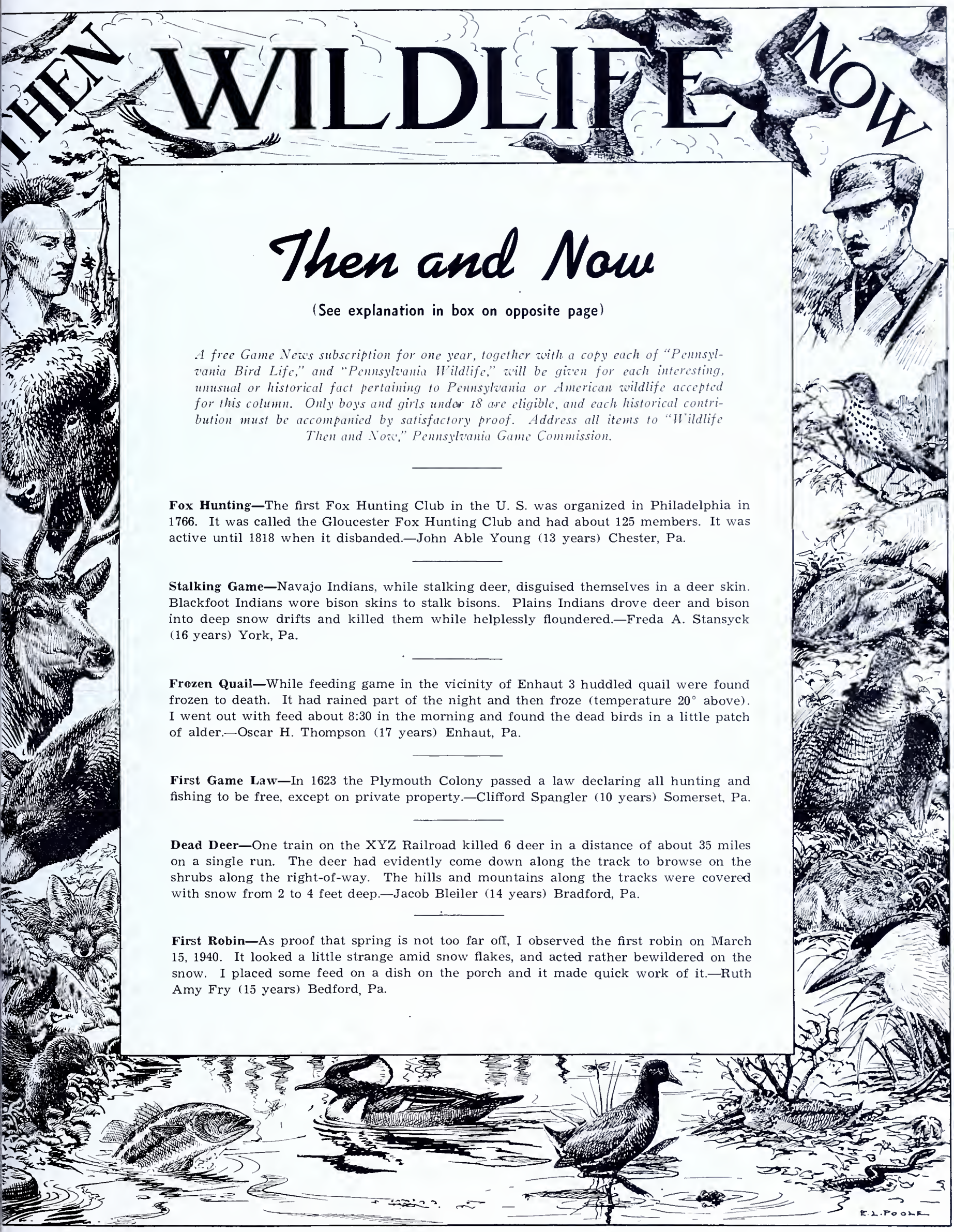
A free GAME NEWS subscription for one year, together with a copy each of "Pennsylvania Bird Life", and "Pennsylvania Wildlife". will be given for each interesting, unusual, or historic fact pertaining to Pennsylvania or American wildlife accepted for this page. Only boys and girls under 18 are eligible, and each historic contribution must be accompanied by satisfactory proof.

Many valuable items can be secured from literature of the historic societies, county histories, books and magazines on wildlife, etc. Close observations while in the woods will very often provide interesting or unusual items which might be acceptable.

In furnishing proof in connection with historic facts there should be given the name of the book and magazine from which it is taken, the name of the author, and the page number.

In this month's issue of the GAME NEWS we have given samples of the kinds of material which will be acceptable.

It is to be hoped that interested sportsmen's organizations will call this to the attention of various groups of young people such as the Boy Scouts, F. F. A. Chapters, and other school groups.



Then and Now

(See explanation in box on opposite page)

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Fox Hunting—The first Fox Hunting Club in the U. S. was organized in Philadelphia in 1766. It was called the Gloucester Fox Hunting Club and had about 125 members. It was active until 1818 when it disbanded.—John Able Young (13 years) Chester, Pa.

Stalking Game—Navajo Indians, while stalking deer, disguised themselves in a deer skin. Blackfoot Indians wore bison skins to stalk bisons. Plains Indians drove deer and bison into deep snow drifts and killed them while helplessly floundered.—Freda A. Stansyck (16 years) York, Pa.

Frozen Quail—While feeding game in the vicinity of Enhaut 3 huddled quail were found frozen to death. It had rained part of the night and then froze (temperature 20° above). I went out with feed about 8:30 in the morning and found the dead birds in a little patch of alder.—Oscar H. Thompson (17 years) Enhaut, Pa.

First Game Law—In 1623 the Plymouth Colony passed a law declaring all hunting and fishing to be free, except on private property.—Clifford Spangler (10 years) Somerset, Pa.

Dead Deer—One train on the XYZ Railroad killed 6 deer in a distance of about 35 miles on a single run. The deer had evidently come down along the track to browse on the shrubs along the right-of-way. The hills and mountains along the tracks were covered with snow from 2 to 4 feet deep.—Jacob Bleiler (14 years) Bradford, Pa.

First Robin—As proof that spring is not too far off, I observed the first robin on March 15, 1940. It looked a little strange amid snow flakes, and acted rather bewildered on the snow. I placed some feed on a dish on the porch and it made quick work of it.—Ruth Amy Fry (15 years) Bedford, Pa.

SPORTSMEN'S QUERIES

By CHARLES F. STAMBAUGH

SHOOTING FROGS

Q. Do you need a hunter's license to shoot frogs?

B.E.D.—York, Pa.

A. No, but a fishing license is required, as frogs come under the custody of the Board of Fish Commissioners. A Hunter's License is needed to shoot at any wild birds or wild animals, but the frog cannot properly be considered as coming within either of these two classifications. The use of lights to shoot or otherwise take frogs is not permitted.

* * *

CARRYING A .22-CAL. REVOLVER

Q. Am I permitted to carry a .22-Cal. revolver with 6-inch barrel on hunting and fishing trips?

N.P.—Philadelphia.

A. Assuming that the .22-Cal firearm to which you refer is a "Revolver" and not an "Automatic Pistol", we see no objection to carrying it for hunting purposes, providing you first register it with your county treasurer. This can be done by showing him a hunting or fishing license for the current year, and paying the required fee of 15c. A registration of this kind will enable you to carry the revolver for hunting, fishing or training dogs during the time the license under which it is registered is effective. Hunter's licenses expire August 31st, whereas fishing licenses do not expire until December 31st. An automatic pistol must not be used to kill any wild birds or wild animals.

* * *

RAISING PHEASANTS AS A HOBBY

Q. I would like to raise pheasants as a hobby. Must I get a permit to do so?

Miss A.B.—Pottsville, Pa.

A. Yes. If you desire to raise pheasants merely for personal pleasure, and not for profit, your only requirement will be a live game possession permit which you should request of the Field Division Supervisor for the Game Commission in your section of Pennsylvania. If he is satisfied that the birds are lawfully in your possession, permit will be issued without charge.

However, should you desire to raise pheasants and sell either the birds or the eggs, it will be necessary (except when sold to the State) for you to take out a game propagating permit at a cost of $5.00 a year. (Application blanks for the $5.00 permit, as well as the names and addresses of the several Field Division Supervisors, will be furnished by the Game Commission, Harrisburg, Pa., upon request).

WHIP-POOR-WILL VS. NIGHTHAWK

Q. Is the Whip-Poor-Will and the Nighthawk one and the same bird?

A. No, they are two distinct and separate species. Although their feeding habits are somewhat similar in that both take their insect food from the air while in flight, the nighthawk actually feeds mostly by daylight, whereas the Whip-Poor-Will feeds entirely after sundown. The Nighthawk is distinguished from the Whip-Poor-Will by the large white spot under each wing, both of which are plainly visible while the bird is in flight. The Whip-Poor-Will has no such spots, and flies only after sunset, except when aroused from its quiet resting place in the daytime.

* * *

STEEL SNARES

Q. What is the law concerning the use of the steel snare in Bradford County, Pennsylvania, for the year 1940?

P.R.B.—Sayre, Pa.

A. Under present regulations the use of snares of any type in Bradford, as well as all other counties in Pennsylvania, is strictly prohibited. The Game Commission by special action authorized the use of snares without springpoles in certain counties, for taking predators, December 16, 1939 to March 31, 1940, but they have not taken any action to date (June) to legalize snares next Winter. Should such action be taken, it will no doubt be shown on your hunters license for 1940. Until the Commission announces further action, no snares may be used.

* * *

THE FIRST SHOT AT GAME

Q. Two men are going through a field hunting together. One of them routs a bird or rabbit; who has the privilege of the first shot, the man who routed the game or the first man who gets his gun raised?

R.B.—Sanatoga, Pa.

A. The matter of who shall fire the first shot is entirely up to the hunters themselves. There is nothing in the Game Law defining just which hunter has the right to fire the first shot at a game bird or animal, regardless of who happens to flush it. The only reference in our law in this connection is that defining legal ownership of game, which is in the person who inflicts a mortal wound causing the death of the bird or animal and enabling the hunter to take possession of the carcass.

HUNTER'S LICENSE FOR SUMMER

Q. I have a friend who wishes, when the season opens July 1st, to go woodchuck hunting. Last year he did not have a license, and now he cannot buy one until the new ones are issued. Just what should he do?

C.R.A.—Washington, Pa.

A. Evidently your friend has been misinformed, as Hunter's Licenses are now on sale at the offices of all county treasurers in the State, as well as at the Department of Revenue, Harrisburg, Pa. Should your friend be unable to obtain a hunter's license at the County Treasurer's office in Washington, Pa., he can procure one by mail from the Department of Revenue, Harrisburg, the fee for a resident license being $2.00.

You will understand that a hunter's license purchased now will expire August 31, 1940, but persons desiring to hunt woodchucks or any other wild animals or birds in season are required to possess a proper hunter's license, even though it will expire in the near future. The law makes no provision for a reduction in the fee.

* * *

DOG TRAINING PRESERVES

Q. How many dog training preserves are there in Pennsylvania at the present time?

A. Four. One of 169 acres in Montgomery County, near Ambler and Fort Washington, on which training is limited to Spaniels and Non-Slip Retrievers. Another of 990 acres in Elk County, west of Johnsonburg; the third in Lycoming County, 800 acres, near Haneyville, on the Coudersport Pike; and the fourth in Forest and Clarion Counties, 985 acres, on State Game Lands, near Fryburg and Leeper. The latter three are bird dog training preserves. No fee is charged for training on any of these areas, but dogs may be trained only from August 20th to the following March 31st, inclusive, under the same legal restrictions as to hours, methods, etc., as are in effect elsewhere in the Commonwealth at that time.

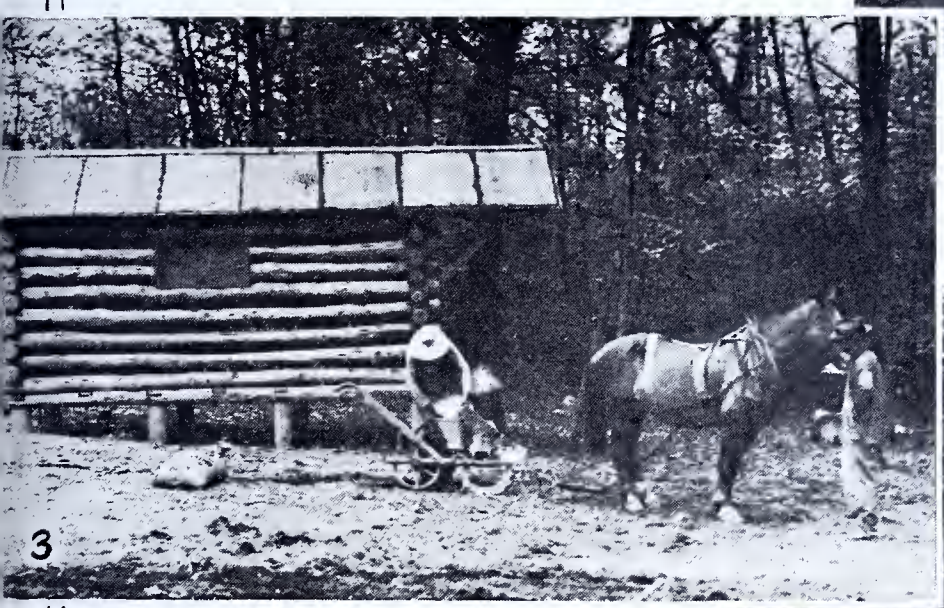
* * *

RIFLES FOR WOODCHUCK HUNTING

Q. Is there any restriction as to the caliber of rifle that may be used for hunting woodchucks?

C.B.D.—Millmont, Pa.

A. The Game Law places no restriction whatsoever upon the size of rifle that may be used to hunt woodchucks or groundhogs this season, so long as the rifle does not reload automatically.



1—Clearing made on State Game Lands for planting Food Patch. 2—Grape Arbors erected on Game Lands to provide food and cover. This is an excellent way to cover barren hillsides. 3—Loading Corn Planter for planting above cleared area. 4-5-6—The Commission has established fourteen Wild Turkey Propagating Areas on State Game Lands. These photographs show fencing being placed around one of them.

THE READING BUCK

By Frank R. DeHaas

★

ON one of the many summer trips to our hunting cabin a few years ago the foundation of this story was laid. As was our custom on nearing the cabin one of us would sneak ahead to watch for porcupines which have been trying to turn it into sawdust. We do not kill the animals wantonly but when we find them eating up our door sills we "put them away".

Well, on this trip C. O. Sortman, affectionately known as the Baron, went ahead to look things over. In a few minutes he returned excited, stating that a young buck was up on the porch looking in the window. When he came in sight of the cabin Mr. Buck was standing in the road. He did not appear frightened or alarmed but proceeded to walk into the woods as though he was accustomed to humans.

We noticed he had a white spot on his left rump about the size of one of Otto's pancakes. Just what had caused him to be looking in the window was a puzzle to us until the Baron came forth with his ready alibi, "I know what he was doing on the porch; he had been in the road but when he heard us coming he hopped up on the porch and took a look at the calendar hanging inside to see what date it was and when he found it was the third of June he said, 'the heck with them guys, they can't shoot me'." That is how he became known as the Reading Buck.

Afterwards on other trips up there we saw him often but he never showed much fear as other deer always did. That year, during deer season, we did not see him at all, but the following summer we saw him often. He was now a nice four-point, and still did not show much fear. This went on until last summer when one of the boys saw him and reported that he was a fine buck with eight nice points, and of course each one of us wanted to get him.

Then last deer season came. On Friday of the first week we had finished a drive about three o'clock, and as it was too late for another, we decided to do a little still hunting. The Baron said he was going down into the little cove, the others went elsewhere. Towards dark all returned but Baron, who appeared long after dark with a serious and excited look on his face. In reply as to what he saw he said, "Well, fellows, I had a poke at the Reading Buck and I think I got him." As to "Where, when and how" from everybody, he said, "I went down in the cove to about a quarter mile from old Jim Lewis' place and sat down. After awhile I looked down into his field and there I saw a big buck acoming across the field. I put my glasses on him and saw that he was the Reading Buck. About that time a car came down the highway and he started to run for the woods. I kinda figured he would come up my way so I sat still and waited, and sure enough there he came up the other side of the cove on a dead run and I took a pop at him."

"She became quite tame and submitted to Jim's petting and was always ready for apples."

Let me say here that when the Baron says "a pop", he means a hit. I think he is the best running shot I have ever had the pleasure of hunting with, but let me go along with the story—"Down he went", said the Baron, "but he jumped up at once and headed back toward the fields. I waited a few minutes and started over where I saw him drop. I found lots of blood and a little farther on I found where he had stopped or laid down; there was a large pool of blood. It was getting so dark I could not follow any farther, so I came back."

Next morning we were up bright and early and at daylight were down where the Baron had knocked the buck down. It was no trouble to follow his trail, which led us straight across the public road and straight toward old Jim Lewis' barn. Baron and the Swede had taken the trail, the rest of us walked down the road and turned into the lane. When we were about half way to the house out came old Jim waving his arms and ordering us not to come any farther and "you fellows get the heck out of the field, too."

We started to tell him what happened and he said, "I know what happened and not one of you fellows is a 'comin' on my place, get that straight." We all retreated to the public road and held a council of war as to what to do. While so doing along came George Koehler, the Game Protector, and we told our troubles to him. Now George has a head that is chuck full of good common sense, so he said, "Fellows, I'll tell you what to do. Get out of old Jim's sight at once. He is darned mad about something. Go on hunting and I will be up before the day is over and tell you what I found out."—which we did.

When we came in for dinner George was there and this is what he told us. "Well, fellows", he began, "I am sort of on the spot and maybe you can help me out. Baron got the Reading Buck all right and I think by this time he has passed out. It looked to me as though he was hit hard. But fellows, I'll have to tell you a story first and see how you feel about it. When we had the last doe season Old Jim was out loading some cord wood and hearing a noise behind him turned around just in time to see a doe with her left front leg almost shot off, limping into his wagon shed, which had doors at both ends. Jim approached carefully, looked in, and found her lying down. He shut both doors, went to the house and brought out a pail of water and some apples which he shoved under the door.

Going back the next morning he found that she had eaten some of the apples. He put in some more and water as well. Well, to make a long story short she recovered and became quite tame and submitted to Jim's petting and was always ready for apples. About this time Jim noticed she was heavy with fawn and made up his mind that the wagon shed should be her nursery if Molly wanted it (that is what he had named her). So sure enough about the first of May Molly was not in the yard, so peeping in the wagon shed he saw her and a tiny bright-eyed fawn.

This tickled old Jim, who had for years cursed the deer for eating up his crops and doing damage to his farm in general. In a few days Molly and Mike, as Jim had called the little buck, were enjoying life to the fullest extent at the expense of the old mountaineer.

He said that little buck was the most pestiferous critter you ever saw. "Why he would pound all over the porch before I got up and sometimes in the house until I had to take him by the scruff of the neck and put him out." He continued to hang around the farm, sometimes being gone for weeks at a time; but as the first gun was fired in hunting season back he and his mother came to the old wagon shed and there they stayed like frightened children, never once entering the woods until long after hunting season had passed.

All winter Mike paid old Jim visits, and if the weather was bad he would stay in the old wagon shed. The next summer one morning Jim found Mike up on the porch, but no Molly. He did not think this strange until one of his neighbors told him that he

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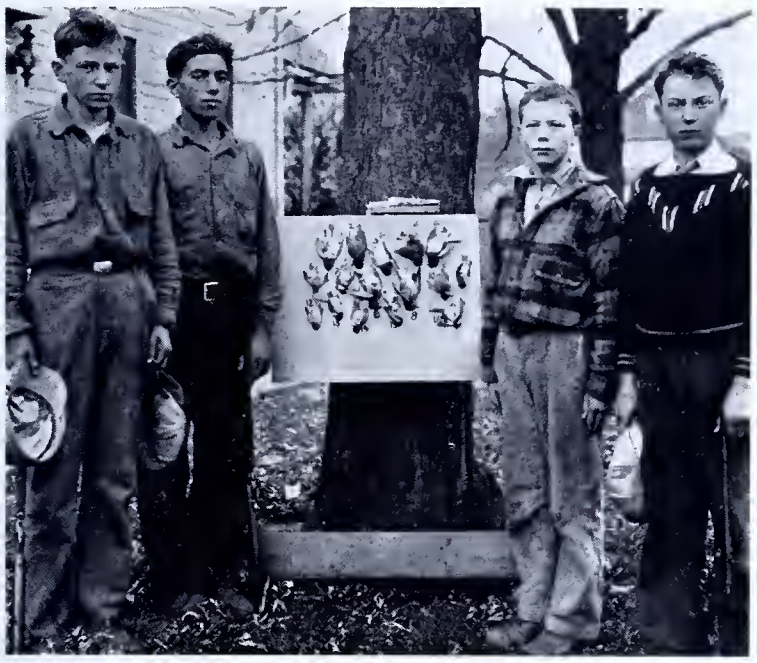
"When we were about half way to the house out came old Jim waving his arms and ordering us not to come any farther."

BOY SCOUTS IN CONSERVATION



These Young Lads were arrested for shooting protected birds in Lackawanna County back in 1928. Today, through education, this practice has been almost completely stopped.

Boy Scouts help the Commission and the Sportsmen to feed. Wildlife during the wintertime, and plant many food-bearing trees and shrubs in the spring and fall.

ONE of the questions often asked by sportsmen's organizations which are really interested in practical conservation work, is: "How can we tie in the natural activities of Boy Scout troops with our efforts?" The Berks County Chapter of the Izaak Walton League believes that it has the answer to this all important question. They urge the study and adoption of the practical plan, which is detailed later, by other sportsmen's organizations and county Boy Scout units.

First, a short history of the program and some of the personalities involved. The Berks Waltonians have divided their organization into several groups in order to successfully carry on their practical conservation work. Principal among these are the Woods, Waters and Wildlife Committees. A director of the Chapter is in charge of each group. Credit for doing this particular job goes to the Woods Committee under the supervision of Director Levin D. Schearer. Directly in charge of working out the actual details of the plan was Waltonian L. B. Richards, who deserves full credit for following the assignment through to a most satisfactory conclusion. When Richards, Schearer and several other Waltonians called at County Boy Scout headquarters in Reading, they were received with open arms by C. F. Urfer who is in charge of Boy Scout work in Berks County. Upon hearing an outline of the plan, Urfer said, "Just the thing we want. We'll give you all the cooperation we can!" The Scout Masters, themselves, at the first meeting of that group, also received the plan most enthusiastically.

All that was necessary then was to work out the details so as to make the plan fair to all concerned. This presented quite a problem as in the city of Reading there were a large number of troops as well as many out in the suburbs and country sections of the county. It was important to make the plan fair to all concerned and give each and every troop an equal chance to earn the awards. After several conferences with Mr. Urfer, and assistance from such members of the Waltonian Chapter as Earl Fisher, Elmer Paulsgrove and Byron Mortimer, who had all been active in Boy Scout work, the following plan was drawn up and accepted as a working basis:

Boy Scout Conservation Program

The object of this program is to promote an all-year-round interest in conservation work and to foster an active participation therein by all the Units of Boy Scouts of America in Berks County. The individual efforts of the boys coordinated into effective group action by their leaders, will accomplish much good work of great value to the whole community.

In recognition of achievements under this program, the Izaak Walton League will present a Ribbon Award in Conservation to each Boy Scout Unit which obtains, during the year ending March 31, 1941, a Conservation Rating of 100 or more, as outlined below. In addition a Special Award will be given to the Unit which has the highest Conservation Rating in the County. The program embraces five distinct activities. Work done under each will earn points which ultimately determine the Conservation Rating for the Scout Unit. At the close of the year (April 1, 1941) the total number of points earned will be divided by the average membership of the Unit for the year. For purposes of this program, the average membership will be taken as one-half the sum of the number of boys enrolled in the Unit on April 1, 1940 added to the number enrolled on March 31, 1941. To qualify for an award, enough work should be done under each of the five parts of the program to contribute a value of at least 10 to the total Conservation Rating. For example, if there is an average membership of 20 boys in a Unit, at least 200 points must be earned under each classification. If there are 30 boys, 300 points must be earned. For Units organized after the campaign begins, average membership and required Conservation Rating will be figured upon an equitable pro rata basis. Scoutmasters will judge whether work performed is in accordance with reasonable standards of usefulness and will record the points earned, showing date, location, class and amount of work, names of boys, and points scored.

The Program

1. Sign Posting—Attractive and informative signs which urge caution in the use of fire or otherwise promote the preservation and care of our forests and wildlife are an essential part of a well rounded conservation program. To be effective, a sign must be posted in a good location and must be properly mounted. Signs should be posted at camp and picnic sites, along highways through woodlands, at entrances of woods roads, along trails, and beside streams. Posting signs too close together is, of course, wasteful. Each sign should be mounted on a board securely fastened at a height 4½ to 6 feet above the ground. All four edges should be tacked to the board in such a manner that wind cannot loosen it. Strips of wood tacked over the full length of each edge will serve the purpose well. A coating of clear shellac or varnish will protect the sign from the weather and prolong its life. For each sign properly posted in a good location 25 points will be scored.

2. Bird Houses—Song birds are the first line of defense against insect pests. Bird houses tend to increase the bird population by protecting the eggs and young birds from the elements and from such predators as cats and hawks. A bird house should be so constructed that it may be readily opened and cleaned after the nesting season is over. For each Bird House, well-constructed in accordance with descriptions in the pamphlet on the Bird Study Merit Badge, (or Special Bird House Bulletin) and located where it will attract nesting birds, 200 points will be scored.

3. Willow Planting—The planting of Willow Cuttings along stream banks is an im-

(Continued on Page 16)

Fur-Bearers » » Their Place in Nature

By S. V. Sedlak

MR. AVERAGE GAME HUNTER, here are some important facts about wildlife. I shall try my utmost to be fair in relating them. You may act as the judge, since you have measurably disregarded the fur-bearing animal which is a very essential part of the natural scheme.

Except the muskrat and the beaver, all of our other fur-bearing animals are also predatory animals because their subsistence is dependent in a measure on, strictly speaking, game animals. We have exactly ten valuable fur-bearing animals. Their classification plus other information I have assembled in relative order is approximate and may help you in your judgment.

Please note that I have fitted the house cat and man's best friend into the analysis. And while referring to the cat and dog, I might mention that I possess the highest regard for these worthy creatures as long as they are deserving of such respect. But unfortunately, man is ignorant of the precept of nature or fails to fulfill his obligation to it, or both. I stress this principally because while our native wildlife has been observed with a critical eye during the many past years, and while it had been singled out into a regular and orderly classification, our indigent domestic pets have hardly gotten more than a twinkle of the eye. Ask any veteran who has followed the rough trails of the trapline, and he will tell you, frankly, the story of the gone-wild feline. And while you, no doubt, felt like throwing mud and more mud at the trapper, it was he who had ninety-nine per cent of your stray cat dispatching work to do. All that glitters (in the sand) is not gold—the track has proven. Again and again the painstaking work of the trapper had rewarded you, not him.

The vagrant dog is not quite as much a menace to our game. There are reasons for that, of course. The fact remains, nevertheless, that it must eat and it will do everything within its power to obtain food when it is hungry. Yet I am of the opinion that a stray dog can starve to death in the woods, since I have taken a number of these homeless creatures in my traps, and in almost every instance there was plain evidence of malnutrition. Not so, however, with the stray cat; in every case there was a picture of health. The cat can readily adapt itself to a wild state; the dog can be considerably handicapped.

Our native wildcat, or bob-cat, is unquestionably, the leading predator among our fur-bearing animals. In the deer country it is generally conceded that the 'cat' is a ferocious creature, that it has attacked and slain many a deer. I am inclined to disagree with this supposition except that the animal may occasionally kill a weakened deer or a fawn. But we cannot afford to be too aggressive against it because in the natural scheme of things the wildcat has a very distinct duty to perform. Nature is cruel in the wild.

While the $15.00 bounty was in effect the hardy boys in the woods country paid particular attention to the wildcat track on the snow. Many an interesting story could be told of the varying experiences gained while in pursuit of the bob-tail. There is the one, for instance, of two Clearfield County fellows who picked up a cat track in the Greenwoods and followed it for three days (slept where night overtook them) and finally bagged it in Potter County. High bounty incentive prompted courage.

The Muskrat is the prize fur of Pennsylvania Trappers, both young and old.

The payment of bounty as a means to control depredating wildlife is justified and desired. It is the most effective way to get results; however, its destined purpose can be alarmingly overpowered and abused.

Intelligent understanding of the various functional phases of wildlife can save you money in the handling of the bounty system. Modern forest conditions, modern trapping facilities and modern efficiency are deserving of due consideration. Time has altered the wildlife aspect considerably. It is necessary that we concentrate on the facts at hand and act on a more conservative basis. We cannot afford to be misled by fictitious propaganda on fur-bearing animals.

Incidentally, there is the overdrawn story of the fox, one of the most picturesque of our upland creatures. Noble, intelligent and shrewd, it is the inspiration of dignified and common man. Although it is respected even above sound logic and guarded as a priceless possession under the "rich man's fox law" in certain suburban counties, yet it has no rating whatever in our summation of relative wildlife values, and there is no substantial reason why we should uphold any longer the nefarious conduct of the trapper and the hunter who take advantage of a lenient law. The fox is not the marauder you imagine it to be; as some unlearned writers have portrayed it to be. It kills a fair amount of small game, it will take the farmer's occasional chicken, duck or turkey if it is hungry and tempted, and can succeed, most certainly; but it also takes of the abundant shrew, mole, mouse and rat population during the winter months, and it feeds extensively on other small verminous creatures, berries and fruits during the summer months.

Then we have the exaggerated impression of the raccoon. Any trapper or farmer can tell you of the 'coon's food-acquiring habits. It is bold, powerfully strong, and probably destroys more game, fish and farm crops than other species of fur-bearing animals. It is no saint, by any means.

In line with the ring-tail family, at least in so far as love for water is concerned, but far more sagacious in principle and practice, are the otter and the mink. They belong to the weasel family. The otter is now a very rare animal in the wild state. It is the "fox" of the water, difficult to trap and even more difficult to hold when trapped. Its scarcity is due, no doubt, primarily to the fact that it has become a victim of modern circumstances; wholesale polution of primary waterways and the consequent wholesale destruction of aquatic life, its natural food, and lack of protection. An otter is considered a prize today; the law guards it with care, and if you ever see one on a fishing trip you will be more excited over it than over the most desired fish. That is nature in the wild.

Minks are not plentiful anywhere. They still frequent at regular intervals almost every small stream and pond which contains fish. They are here today and somewhere else tomorrow; somewhat like the otter in that respect, only on a smaller scale. Fish, not necessarily trout, are an important part of the diet of these two very valuable fur-bearing animals.

Then, when we summarize the whole thing we should, by all means, consider the structural standard of the natural scheme in its entirety; the beauty of the symmetry of nature.

We want to consider, categorically, that nature has made no provision whatever for the taking of game as is practiced nowadays, hence it naturally conflicts with the balancing power of nature. We stock rabbits, pheasants and fish to provide more hunting and fishing via nature's course; yet we have done

ANALYSIS OF PENNSYLVANIA FUR-BEARERS
(viewing the Commonwealth as a whole)

Animal and Classification	Prime Stage	Predatory Aspect	Relative Abundance	Procreation Order	Fur Value 1939-40	Monetary Return 1939-40
Muskrat, Fur-bearer	Feb. & Mar.	Wildcat	Skunk	Muskrat	Beaver	Muskrat
Beaver, Fur-bearer	Feb. & Mar.	Otter	Muskrat	Skunk	Otter	Skunk
Opposum, Fur-bearer	Nov. & Dec.	Mink	Domes. cat	Opposum	Mink	Mink
Raccoon, Game	Nov. & Dec.	Domes. cat	Opposum	Weasel	Fox	Raccoon
Mink, Fur-bearer	Nov. & Dec.	Weasel	Weasel	Fox	Raccoon	Fox***
Otter, Fur-bearer	Jan. & Feb.	Fox	Raccoon	Raccoon	Muskrat	Weasel***
Skunk* Fur-bearer	Nov., Dec., Jan.	Raccoon	Fox	Mink	Skunk	Opposum
Wildcat, Predator	Nov., Dec., Jan.	Vag't dog	Mink	Wildcat	Wildcat	Beaver
Fox** Predator	Nov., Dec., Jan.	Skunk	Vag't dog	Beaver	Weasel	Otter
Weasel, Predator	Nov., Dec., Jan.	Opposum	Beaver	Otter	Opposum	Wildcat
Domestic cat			Wildcat			Domes. cat
Vagrant dog			Otter			

* Protection temporarily removed.
** Both, red and gray; fit to take after October 10.
*** Exclusive of bounty.

very little in the structural way to help nature to maintain, let alone increase, certain desirable game and fish. In this respect I might mention, for example, the case of the deer. We protected the doe until we discovered the acuteness of an over-abundant deer population, and with it disease, malnutrition, depredation of forest and farm crops, lack of natural deer predators, and a comparatively poor winter food supply. This case, in itself, is worthy of special attention inasmuch as it bears signs of retroaction.

Consider the trapper and the fur hunter as an asset rather than a liability in your wildlife program. The balancing power is in their hands. And although your dogs are caught occasionally in a steel trap, you will have to admit that the damage is measurably small. Bear this in mind, it is important: When a fox or another wild creature gets caught in a steel trap it leaps away in a hurry and in to cover when loose-setting is practiced by the trapper; on the other hand, when a dog gets caught in a steel trap, it does not bound away fearfully, but rather tries to work its way through the open places, and it stays in the open. I have taken a number of stray dogs in my traps yet I have never discovered a broken bone on any of those dogs.

In one instance a licensed German police dog got into a largest size No. 3 square-grip steel trap which I had set for a fox in the vicinity of Peale, near Grassflat, Pa. After a very careful survey of the situation I procured two stout, sturdy sticks of wood and approached the animal with due care. When close enough I pressed down hard on the springs of the trap and the dog's foot readily moved free. The foot was swollen, of course, from the several hours imprisonment within the steel jaws. Signs of satisfying emotion showed on the dog throughout the process of release, and again after release. It wended its way out of the brush and onto the nearby road, stopped and looked back at me; then trotted on down the road with a noticeable limp. It stopped and looked back again, and finally went out of sight. Oh! If only a fox would do that! A lone occupied house was out along the railroad and that, no doubt, was the house of its master. Time did not permit me to pay the family a visit to tell of the trapping incident, and although I visited my trapline through that section with regularity thereafter I still refrained from disclosing the story to the occupant of the house, simply because I felt it best to exercise caution to avoid possible trapline disturbance.

Last fall, while in Somerset County, I heard so much of a black fox roaming a certain section so when the frosts came I promptly decided to try to catch the fellow. Well, I did not succeed, but in one of my special sets for the black fox I trapped a dog. Unaware of the fact at the moment, I thought it might be the fox. A minute search through wind-scattered leaves revealed the trail of the trapped animal; it had worked its way along scattered trees down a hillside, crossed a brushy stream, and had tangled up in a log heap along a barbed-wire fence row near a pathway which went up and down another forested hill. Signs showed that the trail ended there, positively, and that a dog had been caught and taken, likewise the trap.

I went to the one-room school building nearby for possible information and learned from a little girl that her dog was in the trap, and that her father had released the dog and had the trap at the house. I asked the girl whether the dog's foot was broken and she said it was not. I asked, furthermore, how to get to her home, and she pointed the way but added that her father had gone away for the day and that I could see him on another day. I did not pay the farmer a visit until a whole week had passed and then he was absent from his home again. His wife was there and I told her politely of my mission. I was apologetic about the whole matter. She said everything was all right, that the dog was none the worse for its experience, but that it had limped for a couple of days. In fact, I saw the dog running about the out-buildings just as lively as any normal dog. The kind-hearted woman, Mrs. James A. Ravenscroft, of Sandpatch, R. D. No. 1, gave me my trap and I went on.

Kind-hearted is right. If only we could view these rare dog-trap occurrences with a similarity; but feelings and dispositions vary.

The trapper is very, very careful, indeed, to avoid dogs. The large trap as mentioned here is not in common use due to the fact that it is clumsy, bulky and heavy. Designed especially for beaver trapping it is not, by any means, the most practical size for use in fox trapping, and the two trapline incidents as related depict the steel trap at its maximum of test. And I have yet to learn of an authentic case where a dog's leg was broken by a steel trap. That is merely imaginative exaggeration.

Trapline technique is too broad in scope to even mention here any particular phase of operation. It is distinctly different from hunting and fishing; it makes a man a naturalist of the first degree, if ever there was a naturalist.

The trapline merits your support, Mr. Average Hunter, and I think you will agree. [If you do, you should support the fair-play measures which the Pennsylvania Trappers' Association has requested.]

Interior of warehouse of one of Pennsylvania's largest fur buyers.

The Land Purchase Program Proceeds

By W. Gard. Conklin

A total of 89 tracts of land, comprising 33,135 acres, became the property of the Commonwealth, for use of the Game Commission during the State's fiscal year June 1, 1939 to May 31, 1940. Their acquisition brought the aggregate area of State Game Lands to 636,680 acres, distributed through 57 of the 67 counties of the State.

Since last reported in the May 1940 issue of the "Game News", prepared March 29, 1940, titles were secured for 26 tracts comprising 11,706 acres, which of course, are included in the figures given above. The 26 tracts recently acquired are here listed, along with the serial number of State Game lands of which they either became a part or were designated:

County	Grantor	Acreage	State Game Lands
Venango,	Mrs. N. E. Liotta	52.3	39
Bedford,	G. A. Carpenter	20.0	48
Columbia,	Headley Sult	48.6	55
Columbia,	Lloyd Schell, et ux	403.3	58
Columbia,	Mrs. Mary Klingerman	364.3	58
Crawford,	Antonas Kudis	144.2	69
Wayne,	Clarence T. Bailey	637.5	70
Butler,	Anthony Gostey	23.9	95
Butler,	Samuel B. Hilliard Heirs	38.0	95
Venango,	Mrs. Harriett H. Stewart	107.6	96
Erie-Crawford,	2nd National Bank of Erie	1,058.8	101
Crawford,	Ariana S. Kennedy	620.2	101
Centre,	E. S. Bennett	801.4	103
Luzerne,	Luzerne Ochre Mfg. Co.	1,521.2	119
Crawford,	Milan A. Gray	469.7	122
Lawrence,	Mrs. Fannie J. Shippler	95.0	150
Erie,	Frank A. Cooper	84.3	154
Cumberland,	John A. Swartz Est.	29.6	169
Perry-Cumberland,	V. C. McCormick, et al	839.3	170
Juniata,	Kulp Lumber Company	98.4	171
Juniata,	Edward S. Thompson, et al	492.8	171
Juniata,	Laura E. McNaughton	84.1	171
Juniata-Perry,	Scholl and Hoverter	232.6	171
Bradford,	Mrs. Marion Lewis	722.3	172
Beaver,	Mrs. Susan Laughlin	166.4	173
Indiana,	Farmers & Miners Trust Co.	2,596.8	174

The Commission, at its meeting April 18, 1940, acted on 49 land purchase offers, comprising a total of 20,698.3 acres. Offers for 17 tracts totalling 3,369 acres were accepted and purchase contracts promptly entered into with the respective owners. The Commissioners rejected 22 offers totalling 10,068 acres, and postponed action on 10 others totalling 7,262 acres.

The 17 offers which were accepted and for which purchase contracts were entered into are:

County	Owner	Acres	Adjacent to
Bedford,	Ealy W. Hann	150.0	Game Lands No. 97
Blair,	Guy M. Ormsby	450.0	Game Lands No. 147
Butler,	Wm. N. Rettig	53.0	Game Lands No. 164
Elk,	Fred W. McFarlin	100.0	Game Lands No. 44
Erie,	Andrew Semanek	74.0	Game Lands No. 154
Erie,	Jennie C. Himrod	59.0	Game Lands No. 109
Erie,	Frank C. Hull	85.0	Game Lands No. 109
Indiana,	County Commissioners	167.0	Others being pur.
Indiana,	County Commissioners	129.0	Others being pur.
Lycoming,	J. A. Gamble	36.0	Game Lands No. 68
Lycoming,	O. M. Campbell and Robert R. Neefe	50.0	Game Lands No. 75
Lycoming,	O. M. Campbell	86.0	Game Lands No. 75
Warren,	Wheeler & Dusenbury	1,100.0	Game Lands No. 29
Wayne,	Laura M. Shofkom, et vir	210.0	Game Lands No. 70
York,	Frank M. Burns	100.0	New Project
York,	John W. Baker	120.0	New Project
York,	W. W. Posey	400.0	New Project
	TOTAL	3,369.0	

Including these 17 tracts, the Commission had under contract for purchase as of May 31, 1940, approximately 40,000 acres. The boundary lines surrounding most of this acreage had been surveyed, and a large proportion of the titles had been examined by that date. Unfortunately, titles for many of the tracts are defective in one respect or another and conveyancing to the Commonwealth must be delayed until the respective owners clear up the defects.

BOY SCOUTS IN CONSERVATION

Continued from Page 13

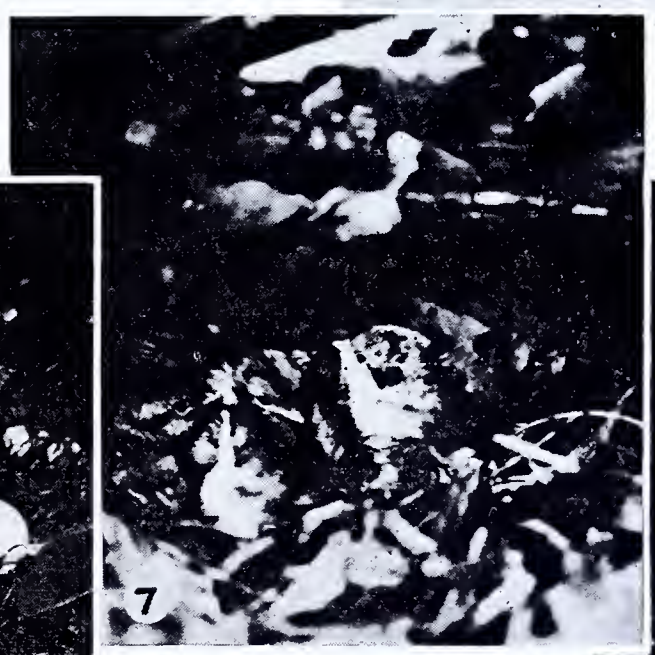
portant Conservation activity. While adding natural beauty to the streams, the willows with their overhanging branches shade the water, helping to keep it cool, thereby benefiting the fish. The willow is the natural home of thousands of insects that complete their life cycle within a few feet of the surface of the stream, and it therefore provides an unlimited source of insect food for the fish. Willows are important in soil and water conservation. The roots bind the soil preventing loss by erosion, and by absorbing many times their own weight in water, tend to control the source of water to the stream. Live pieces of willow, preferably weeping willow, if planted under favorable conditions will sprout vigorously and grow to be large trees. Cuttings are made about twelve inches long from branches one-fourth to one-half inch in diameter. They should be taken only in April and May. If they are to be stored for any time before planting, they should be covered with a layer of moist sand. Cuttings should be made from the current year's growth, and from the top branches of vigorous trees. All cuts should be made with a sharp knife at an angle of forty-five degrees. Care should be taken to avoid crushing the stems, loosening the bark or disturbing the buds. Planting sites with heavy sod, dense weeds, and brush should be avoided. The outside banks at bends of a stream are particularly good locations if other factors are suitable. Cuttings should be planted not less than 15 feet apart. For planting the cuttings a bar one-half inch in diameter is used. It should be forced into the ground at a slight angle. A cutting is inserted in the hole thus formed so that at least two to four buds extend above the ground. For each 10 Willow Cuttings properly planted in suitable locations along stream banks during April and May, 5 points will be scored.

4. Game Shelters—In these days of intensive development, clean farming practices, good roads, automobiles and an increasing number of hunters, game cannot be left to shift for itself, particularly with respect to food and cover. In places where good natural cover is not available, the construction of artificial shelters to provide protection and to serve as suitable places for artificial winter feeding, is highly desirable. Instructions for building Game Shelters and illustrations thereof are contained in Bulletin No. 11 of the Pennsylvania Game Commission, "More Food for Upland Game" pages 15 to 40. For each Game Shelter, substantially constructed in an area with insufficient natural cover for small game birds and animals, 400 points will be scored.

5. Game Feeding—Artificial feeding of game is, of course, necessary or desirable only in the winter when natural food is scarce or covered deeply by snow. Feed should be placed where it is not likely to be covered with snow. Shelters built during the summer or natural thickets are the best places to feed small game. The Game Commission Bulletin No. 11 referred to under the previous heading, Game Shelters, describes in great detail the proper methods to be followed. For each pound of food properly distributed at a time in winter when conditions warrant artificial feeding, 10 points will be scored.

The attached program was printed in its entirety in the official Berks County Boy Scout bulletin after it had been adopted. It has been referred to since and is at the present time being entered into by individual Boy Scouts all over the county. District round-table discussion meetings have been held in four or five different parts of the county by the troop leaders and representatives of the Waltonian Committee have been

(Continued on Page 32)



1—Grouse on Nest. 2—Nest and Eggs. 3—The eggs show first signs of Pipping. 4—As the Pipping progresses. 5—Emerging from Shell. 6—Some out; some coming out. 7—A Nest Full. 8—The Finished Product. Editor's Note: The above photographs were taken by William Drake, Commission Photographer. The nest was under observation by Game Protector W. B. McClarin, Cherry Tree.

In Memoriam

Asso. Press Photo, courtesy Hbg. Evening News.
JOHN S. FISHER

Always a friend of the sportsmen, John S. Fisher, former Governor of Pennsylvania, helped the progress of wildlife administration in the Keystone State immeasurably during his tenure of office. His death reduces to three the number of surviving Governors of the State: John K. Tener, Gifford Pinchot, and George H. Earle, who preceded Governor Arthur H. James.

Governor Fisher came into office January 18, 1937, after spending many years in public life in Pittsburgh and as a State Senator.

He was the descendant of families dating back to Colonial days, and was born in South Mahoning Township, Indiana County, May 25, 1867. He was educated in the public schools, and was a graduate of the Indiana High School, of which he later became principal, and of the Indiana State Normal School. After teaching for seven years he was admitted to the Indiana County Bar in August, 1893.

In 1900 he was elected to the State Senate from the Indiana-Jefferson district, and was reelected in 1904 and 1908.

As a Governor and a man he was friendly in all his contacts at the Capitol. Affable and quiet spoken, he treated political friends and foes alike, if they played fair.

C. MORT PALMER, JR., RESIGNS

C. Mort Palmer, Jr., Secretary of the American Wildlife Institute, has tendered his resignation and will leave his post just as soon as a successor is selected. He plans to enter the poultry and egg business.

"Mort" as he was more often called by most of his friends, received his wildlife education at the Conservation Institute in New Jersey and then went with the DuPont organization on a game farm near Wilmington. He has been editor of the magazine American Wildlife since the days of Seth Gordon and has made notable contributions to the better understanding of wildlife problems, both technical and administrative. We are sure that his friends will miss him in the field of wildlife while wishing him well in his new undertaking.

AMERICANS AND GUNS

Noting the successful use by Hitler of troops dropped behind enemy lines by parachute, various communities in this country are organizing groups of sharpshooters for home defense against attack employing such tactics. We are told that the success which parachute attacks achieved in Holland and Belgium could not be duplicated in the United States because so many of our people have guns and know how to use them.

A great number of Americans do have guns and would know how to use them in war time, but the experience of the field forces of the Pennsylvania Game Commission during the 1939 hunting season shows that a large proportion of our Pennsylvania gun owners do not know how to use them in peace time. For instance, preliminary reports on arrests during the hunting season show that the most frequent violation discovered by game protectors and other officers was the transportation of loaded guns in automobiles. This is not only against the laws of the state, but, as well, against the laws of common sense. Men who know guns should know better than to handle them in so risky a fashion.—Williamsport Sun.

STUDY CONSERVATION IN TENNESSEE

Robert Steventon, Chairman of the Conservation Education Committee of the State Federation of Sportsmen's Clubs, and your Editor, recently made a thorough study of the Conservation Education program now being carried on by the Department of Conservation of the State of Tennessee in cooperation with the State's Universities and State Teacher's Colleges. The study bore much fruit and a resume of the Tennessee program will appear in a subsequent issue of Game News under the pen of Mr. Steventon.

In Memoriam

FRANKLIN G. McINTOSH

Another true friend of Pennsylvania sportsmen passed away on June 11 at his Beverly Hills, California, home. Franklin G. McIntosh, formerly of Franklin, was a Member of the Game Commission from April 8, 1924 to May 28, 1931, and most ably represented the sportsmen of northwestern Pennsylvania during his tenure of service.

A resident of Franklin for many years, Mr. McIntosh loved to hunt and fish, took an active interest in sportsmen's activities, and was highly respected by the people of his native region for his outstanding public service in civic affairs.

Forced to go west because of ill health, he moved to California where he employed his leisure time collecting precious gems in the nearby desert country. Executive Director Gordon visited the former Commissioner last summer while attending the International Conference of Game, Fish and Forestry Commissioners, and had an opportunity to look over a portion of his amazing collection. At that time the former Commissioner apparently was enjoying fairly good health, and his enthusiastic interest in Pennsylvania's wildlife program had not waned one iota. The Commission and its staff join with the sportsmen of the Keystone State in extending their deepest sympathy to his wife and family.

CURRENT TOPICS

Editor's Note: The response which Pennsylvania sportsmen showed to the Commission's plea to purchase and use its new Game Food Plot Mixture was amazing and the supply was exhausted in a relatively short time. Many groups from outside the State also purchased the Mixture.

PURCHASERS OF FOOD PLOT MIXTURE
From Philadelphia Seed Company

C. R. Horting, R. D. #1, Elliottsburg, Pa.. 12 lbs.
Mahaffey Game & Fish Protective Assoc., Mahaffey, Pa. 50 lbs.
S. C. Mengel, 108 S. 10th St., Louisville, Ky. 50 lbs.
E. H. France, Rossford, Ohio 100 lbs.
Donald E. Hart, R. D. #2, Jeannette, Pa. 10 lbs.
McKean County Sportsmen's Club, Inc., George L. Pierotti, Sec., Bradford, Pa. 200 lbs.
Emlenton Rod & Gun Club, F. E. Heeter, Emlenton, Pa. 100 lbs.
H. E. Wilt, P. O. Box 148, Lewistown, Pa. 14 lbs.
Mrs. J. D. Heard, 5720 Aylesbro Ave., Squirrel Hill, Pittsburgh, Pa. 20 lbs.
Ramon L. Faust, Sec., Friedensburg Fish & Game Assoc., Pottsville, Pa. 16 lbs.
Francis Keifer, Chairman, Plant Food Plot Comm., 405 W. High St., Frackville, Pa. 30 lbs.
Joseph Phillips, 131 Lincoln St., Dupont, Pa. 100 lbs.
Walter Hochstein, 110 Darby St., Johnstown, Pa. 15 lbs.
Geo. P. Tallant, Sec., Westmoreland City Sportsman Assoc., Westmoreland City, Pa. 16 lbs.
Clarence W. Beck, Youngwood, Pa. 12 lbs.
R. E. Blankenbuehler, Elizabeth, Pa. 20 lbs.
John D. Stoner, R. D. #1, Kirkwood, Lancaster Co., Pa. 10 lbs.
Kenneth Waltimyer, South Main St., Red Lion, Pa. 100 lbs.
Henry S. Gates, Western Reserve Fish & Game Protective Assoc., 19 Buhl Blvd., Sharon, Pa. 100 lbs.
J. Earl Way, Sec., Hempfield Farmers & Sportsmen's Assoc., Landisville, Pa. 100 lbs.
Robert N. Johnston, Sec., Matamoras Rod & Gun Club, Inc., Matamoras, Pa. 100 lbs.
George D. Keller, 538 N. Chestnut St., Palmyra, Pa. 150 lbs.
Frank W. Preston, Box 847, Butler, Pa. 100 lbs.
Dr. L. C. Creighton, Unity, Pa. 20 lbs.
F. M. Robbins, Main St., Millville, Pa. 50 lbs.
Russell E. Krupp, Montgomery County Federation of Sportsmen's Clubs, Schwenksville, Pa. 15 lbs.
Chester P. Price, Home Rod & Gun Club, 431 E. Main St., Everett, Pa. 50 lbs.
Harry Lonkert, Sec., Marion Hill, New Brighton Sportsmen's Club, 719 11th Ave., New Brighton, Pa. 100 lbs.
A. J. Adams, Eastern Lancaster County Rod & Gun Club, Gap, Pa. 100 lbs.
C. A. Bowden, 567 Franklin St., Freeport, Pa. 15 lbs.
R. E. Christian, Staunton, Va. 100 lbs.
Samuel Damico, Sec., West Deer Township Sportsmen's Club, Box 272, Curtisville, Pa. 50 lbs.
Leon Hue, Frazier Township Sportsmen's Club, 131 W. 8th Ave., Tarentum, Pa. 15 lbs.
R. E. Blankenbuehler, Elizabeth, Pa. 20 lbs.
Harry K. Roberts, R.D. #4, Washington, Pa. 25 lbs.
Earl W. Maurer, City Hall, Wilkes-Barre, Pa. 20 lbs.
Beaver Sportsmen's Club, Glenn C. Dodds, Sec., Beaver, Pa. 60 lbs.
Norman L. Kiel, 536 Morse Ave., Ridgefield, N. J. 50 lbs.
E. D. Karcher, Starrucca, Pa. 15 lbs.
Howard Faust, 625 Lincoln St., Easton, Pa. 10 lbs.
Daniel S. McPeek, Matamoras, Pa. 100 lbs.
George W. Eshelman, Quarryville, Pa. 200 lbs.
George Dyer, Diabase Farm, New Hope, Pa. 10 lbs.
R. S. Holtzinger, Sec., Windsor Fish & Game Assoc., Windsor, Pa. 50 lbs.
W. K. Stiffler, Sec., 522 Ridge Ave., Canonsburg Sportsmen's Assoc., Canonsburg, Pa. 30 lbs.
Tremont W. Keim, Chairman, Tri-County Fish & Game Assoc., Pottstown, Pa. 35 lbs.
F. J. Curtis, Sec., Washington Sportsmen's Assoc., Washington, Pa. 200 lbs.
C. A. Bowden, Freeport Sportsmen's Club, 567 Franklin St., Freeport 15 lbs.

MR. FARMER: LEAVE SOME BRUSH AND BRIARS FOR WILDLIFE....PENNSYLVANIA GAME COMMISSION

Frank Wapinsky, Stein's Hollow Beagle Club, 147 N. 2nd St., St. Clair 25 lbs.
W. L. Golden, Claysville Sportsmen's Assoc., Claysville 100 lbs.
Dale Elwood, Spring Church Sporesmen's Assoc., Apollo 100 lbs.
Amos J. Adams, 321 S. 9th St., Lebanon 24 lbs.
Coalwood-Caretta, Conservation Club, Coalwood, W. Va. 100 lbs.
Boulton & Boulton, Clearfield Trust Co., Bldg., Clearfield 50 lbs.
Franklin Twp. Rod & Gun Club, Elwood City 50 lbs.
M. G. Hench, 2434 Reed St., Harrisburg 10 lbs.
John Zernhelt, Zerbe 25 lbs.
Saginaw Game Protective Assoc., Mt. Wolf 50 lbs.
B. W. Baker, North Jeanette Sportsmen's Assoc., Jeanette 50 lbs.
F. & G. Prot. Assn. Morrell Chapt. Fayette Co., Joseph Tremba, Dunbar 20 lbs.
Sealybourne Kennels, 8046 South Wabash Ave., Chicago, Ill. 50 lbs.
Wabeno-Soperton Sportsmen's Club, H. A. Pichotta, Sec., Wabeno, Wisc. 100 lbs.
Nevin Fry, Merrittstown Chapt. Fayette Co. Fish & Game Assoc., Merrittstown 100 lbs.
Bucks Co. Shooting Assoc., Chalfont, Pa. 40 lbs.
George Welty, 952 Walnut St., Allentown 50 lbs.
St. Mary's Sportsmen's Assoc., 477 Washington St., St. Marys, Pa. 30 lbs.
C. S. Schneck, 237 N. 6th St., Allentown, Pa. 50 lbs.
Harry C. Keim, 47 N. 2nd St., Emmaus, Pa. 30 lbs.
C. D. Cannon, 3 West St., Warren, Pa. 12 lbs.
Wilbur Price, 79 Cooper Ave., Johnstown, Pa. 15 lbs.
Langleloth Sportsmen's Assn., I. P. Lockert, Sec., Langeloth, Pa. 100 lbs.
Charles J. Schlesinger, Monroe, Orange Co., New York 100 lbs.

Keystone Garage, Carl Haidacher, Prop., 116 Canal St., Danville, Pa. 100 lbs.
Arnold Sportsmen's Club, 2014 Kenneth Ave., New Kensington, Pa. 10 lbs.
Geo. F. Martin, Sec., Bulger Sportsmen's Assoc., Bulger, Pa. 100 lbs.
W. J. Rumbaugh, Sec., McDonald Sportsmen's Assoc., 207 Valley St., McDonald, Pa. 300 lbs.
J. M. Phillips, Tri-County Fish & Game Assoc., Pillow, Pa. 50 lbs.
A. F. Gwynne, Rices Landing, Pa. 100 lbs.
J. A. Scheiring, 3223 W. Tuscarawas St., Cantong, Ohio 50 lbs.
J. Turner Brown, Stewartstown, York Co. 15 lbs.
John W. Hecker, R. D. #2, New Kensington, Pa. 15 lbs.
Oswayo Valley Rod & Gun Club, Shinglehouse, Pa. 30 lbs.
J. A. Bloch, Bloch Bldg., 40th & Water Sts., Wheeling, W. Va. 100 lbs.
Gus Steinke, 1110 Maplewood Ave., Ambridge, Pa. 200 lbs.
Ridgewood Hofbrauhaus & Rathskeller, Inc., 5411 Myrtle Ave., Brooklyn 40 lbs.
John M. Gnan, 402 Daly St., DuBois, Pa. 10 lbs.
Merrittstown Chapt., Fayette Co., Fish & Game Assoc., Merrittstown 100 lbs.

Harrold Jr. Sportsmen's Club, R. D. #1, Greensburg, Pa. 20 lbs.
H. D. Koch, Sec., Lehighton Sportsmen's Assoc., 132 N. 9th St., Lehighton, Pa. 30 lbs.
J. B. Kintzing, Hanover, Pa. 30 lbs.
Frank E. Heller, 253 W. Fourth St., Williamsport, Pa. 20 lbs.
Frank J. Wapinsky, 147 N. Second St., Saint Clair, Pa. 25 lbs.
Dr. John L. McCorkle, North Mehoopany, Pa. 20 lbs.
Canonsburg Sportsmen's Ass'n., Wilbur K. Stiffler, 522 Ridge Ave., Canonsburg, Pa. 100 lbs.
J. C. Predebon, Arnold Sportsmen's Club, Arnold, Pa. 10 lbs.
E. T. Balderston, Mgr., Penn Manor Club, Morrisville, Pa. 200 lbs.

PURCHASERS OF FOOD PLOT MIXTURE
From Henry F. Michell Company

Ivan P. Hanes, c/o Otto Conservation Ass'n., Duke Center, Pa. 50 lbs.
James F. Lysett, 120 Montour St., Montoursville, Pa. 12 lbs.
Charles Forrer, 502 Dauphin Bldg., Harrisburg, Pa. 50 lbs.
R. E. Sawhill, Midway, Pa. 25 lbs.
Greensburg, Pa. 10 lbs.
Charles E. Marsh, 311 Hawthorne Street, Greensburg, Pa. 10 lbs.
L. R. Rumfelt, R. 1, Millerstown, Pa. 10 lbs.
John W. Easton, 100 Broadway, New York 40 lbs.
A. E. McCloskey, c/o Delmer Alery, Stahlstown, Westmoreland Co., Pa. 30 lbs.
R. O. Anderson, 600 Second Ave., Pittsburgh, Pa. 100 lbs.
W. Alden Smith, c/o Perry Township Game Ass'n., Shoemakersville, Pa. 3 lbs.
Henry McKie, 302 West Spring St., Titusville, Pa. 20 lbs.
Waverly Sportsmen Club, c/o Robert Dixon, Waverly, Pa. 50 lbs.
Kane Fish and Game Club, Kane, Pa. 50 lbs.
John Douds, R. D. 2, Apollo, Pa. 25 lbs.
Gilbert Lucas, R. D. 1, Riegelsville, Pa. 10 lbs.
N. Y. State Conservation Department, 166 Grant Ave., White Plains, N. Y. 100 lbs.
H. C. Marbarger, R. D. 1, Temple, Pa. 56 lbs.
Joseph M. Kennedy, Penn, Pa. 10 lbs.
Myron G. McGrew, c/o Rillton Sportsmen Ass'n., Box 458, Rillton, Pa. 20 lbs.
Charles D. Smith, 3003 Homehurst Ave., Pittsburgh, Pa. 10 lbs.
Nicholas Biddle, Noble Station, Pa. 30 lbs.
C. H. Meredith, Saint John, New Brunswick, Canada, (New Brunswick Fish & Game Ass'n.) 20 lbs.
Prof. R. E. Trippensee, Massachusetts State College, Amherst, Mass. 10 lbs.
L. R. Steuer, c/o W.M.C.A., Williamsport, Pa. 10 lbs.
R. C. Brown, c/o Brown Motor Supply Co., Bedford, Pa. 15 lbs.
Mr. Gilbert Lucas, R. D. 1, Riegelsville, Pa. 10 lbs.
Prof. R. E. Trippensee, Massachusetts State College, Amherst, Mass. 10 lbs.
Tidioute Buck Tails, R. Clinger, Sec'y., Tidioute, Pa. 40 lbs.
Robert Dixon, c/o Waverly Community House, Waverly, Pa. 50 lbs.
R. Kirk, Ridgway, Pa. 25 lbs.
A. H. Wilcox, c/o Canton Rod & Gun Club, Canton, Pa. 50 lbs.
Sahli Motor Co., for Beaver Falls Sportsmen's Ass'n., Beaver Falls, Pa. 50 lbs.
Harry E. Winters, Ralphton, Pa. 10 lbs.
Geo. J. Veach, 232 Seneca St., Oil City, Pa. 9 lbs.
Suermann & Baudisch, 2837 W. Lehigh Ave., Philadelphia, Pa. 50 lbs.
William A. Valentine, R. D. 2, Dallas, Pa. 50 lbs.
Robert J. Byler, c/o Morgantown Rod & Gun Club, Morgantown, Pa. 10 lbs.

PLANT FOOD FOR WILDLIFE...PA. GAME COMMISSION

CURRENT TOPICS

Seeking refuge from a crowd of persons which had gathered to watch them, a mother bear and her three cubs climbed a high tree at Stoney Point, above Salladasburg. This long-distance picture shows the mother, below, left and two of her cubs. The third cub was on a high limb behind the tree trunk, when the picture was taken. So that the bears would come down out of the tree and continue their way of life, Game Protectors LeRoy Gleason and Raymond Morningstar, and John B. Ross, Field Division Supervisor of the Game Commission, dispersed the crowd.—Photo courtesy Williamsport Grit.

NOTES FROM THE FIELD

Due to the fact that a large number of deer are killed each summer and early fall by the Erie R. R. between Mill Rift and Parkers Glen a friend from Port Jervis, N. Y. has agreed to help drop salt from his plane into this isolated section of the country in order to keep the animals from coming down onto the railroad tracks to obtain salt from the drippings from the box cars. Mr. Nevell Watson of Port Jervis, N. Y. is the donor of the plane.—Game Protector John H. Lohmann, Pike County.

On May 31, a cub bear fell out of a tree near the Forestry Buildings, Sheffield. John Elniski, who lives about 30 yards from the tree saw the little animal and brought it into Sheffield. I was called and placed it where its mother could pick it up again. I returned the next morning to see if the mother had found the cub, but it was nowhere to be found so I assumed that the mother had found it.—Game Protector George L. Norris, Warren County.

"On Sunday, May 5, while eating lunch I received a call from Fredericktown that there was a deer in the river. I went there and found a doe that had crossed the river several times and was completely exhausted. I took this deer to Game Lands No. 117 and released it. At the time it was released it seemed weak but was able to travel all right. Two days later it was found by WPA workers in a very weakened condition. I took it to a shed on the Game Lands and for two days we fed it mash and grains but it finally died." —Game Protector Carl C. Stainbrook, Washington County.

On May 29 while walking through the wooded section of game propagation area No. B-14, I visited a grouse nest which I had located some time ago. The nest had been destroyed not long before as the broken eggs were still wet in the bottom of the nest. This nest was located in a dense thicket of hemlock, and thinking that possibly the crows might have a nest I began an investigation of the larger trees. In doing so I located a very large opossum in one of the hemlocks. I killed it, examined its stomach contents, and found that it had very recently been eating eggs, and from the size and shape of some small parts of the egg shells, I am well satisfied it had eaten the eggs from the grouse nest.—Game Protector Maynard R. Miller, Wayne County.

"While checking fishermen along the Lehigh River one day during the past month I killed a large water snake which had consumed two trout, each about seven inches long. Another time near the same vicinity I saw an otter, the first one I have ever seen in Carbon County."—Game Protector W. C. Achey, Carbon County.

May 25, 1940 marked an even forty years of Federal cooperation in wildlife in the United States.

Harry Confer, a member of the Asaph Rod and Gun Club, reported seeing a bear with four cubs near Ansonia, Tioga County. on May 24.—L. F. Manning, Delaware County Fish and Game Association.

"Mr. C. C. Brennecke our local Game Protector told me that you would like to have a report of the activities of our high school boys who hunted and fished this year. We believe that this type of recreation is a definite part of our school program and should receive the support of the Department of Public Instruction.

"Approximately three hundred and fifty boys were organized into a hunters group at the beginning of the school term. These boys met every week to receive instructions concerning hunting laws, trespass laws, conservation, etc. Dr. J. C. Nugent a prominent big game hunter spoke to the boys about safety, good sportsmanship and Moose hunting in Canada. Mr. Joseph Parks another noted sportsman described his experiences in big game hunting and wild boar hunting in Tennessee. Fine advice was offered by these men. Mr. Brennecke gave practical demonstrations on safety, conservation, good sportsmanship, etc.

"The boys were asked to bring their hunting licenses to school and their numbers were registered in our office. When a boy was absent from school for hunting he brought an excuse from home stating that he was hunting. We explained the attendance laws to the boys and did not have a single case of truancy or skipping school for the purpose of hunting. Upon their return from hunting they registered their game killed.

"The first boys returning from the first day of hunting gave the following report:

87 boys returned from hunting the first day.

62 boys had not been absent before this year.

25 boys were absent before.

Game killed the first day—Rabbits 147, Squirrels 45, Grouse 6, Quail 3, Pheasants 6, Woodcock 1.

Summary for the season—Rabbits 539, Gray Squirrels 249, Grouse 45, Quail 11, Pheasants 9, Woodcock 1.

The boys reported that they fed game during the winter and helped the local sportsman's association in every possible way to protect game and prevent forest fires. I did not get the record of the number of deer killed this year by our boys.

"Thirty-two boys went fishing the first day. They caught 139 trout, the largest being 21¼ inches. They fished Spring Creek, Spruce Creek, Penn's Creek, Potter County, Yellow Creek, Bald Eagle, and others.

"The boys have been interested in the work and have asked to have it continued next year. I do not believe that boys should be taught to bring excuses to school when they go hunting which state that they have been absent because of sickness. Our work has been beneficial in arousing a fine loyalty between school and boys concerning sportsmanship in general."—Earl W. Dickey, Director Student Activities and Boys' Attendance Counselor, Altoona Senior High School.

"While working on State Game Lands No. 156, Lancaster County, I counted eighteen Land Turtles in a fire trail a distance of 1¼ miles. Some of them were making holes, probably to deposit eggs."—Game Protector Raymond Holtzapple, Lebanon County.

CURRENT TOPICS

"On the morning of May 24 about 9:00 A. M. I received a telephone call to come to the Hillsdale area near Clearfield. Upon arrival there I found that two deer, a buck and a doe, had fallen into an abandoned reservoir during the night. Evidently chased by dogs they had leaped over a guard rail and into the 24 ft. deep cement pit. School children on their way to school had made the discovery. Mr. Clyde Bartley, a Deputy Protector, soon appeared with several ropes and calling for volunteers, who numbered several hundred persons, we went down into the reservoir by means of a ladder. The principal of the Hillsdale school declared a recess so the pupils could watch the event. It was soon discovered by the rescuers that the only way possible to get the animals was to run them until they were exhausted. On several occasions we thought we had them cornered but when an attempt was made to get hold of them they jumped over the heads of the men with great cheers coming from the spectators. Finally the deer were exhausted and were tied and hoisted to the top by willing hands, after which they were taken to the woods and released. They were skinned and bruised in attempting to regain their freedom but will be all right."—Game Protector Frank E. Couse, Clearfield, Pa. (Clearfield County).

"While trying to round up stray dogs during the nesting season I also kept a check on grouse nests and now have over twenty under observation. I have kept records on all of them and at the conclusion of my survey shall submit a detailed report. Mr. Drake, of the Educational Division, was up and took some pictures which I hope turn out satisfactorily."—Game Protector W. B. McClarin, Indiana County. Editor's Note: Pictures, both still and colored movies, turned out fine.

"While hunting vermin on May 20 I shot a crow in a cornfield. I noticed that its bill was all muddy and was of the opinion that it was pulling corn. I opened it and found that it held two grains of corn that showed no signs of sprouting in its gullet. I found 6 cut worms and parts of several other hard yellowish shelled bugs. It is true that the crow commits some depredations, but it destroys insects also."—W. W. Britton, Game Protector, Franklin County.

"While patrolling Beaver Run section in Washington Township on Saturday, May 11, I came upon a groundhog wandering about with a tin can forced over its head. After taking two snapshots I took the can from its head and for several seconds it sat there looking at me as if to say "thanks" before leaving in a hurry for its home. The chuck was of good size and the can measured 2⅞" in diameter and 4½" deep."—Game Protector John S. Shuler, Westmoreland County.

"At the farm of Samuel Kissel south of Mt. Union, Pa., there was found a ringneck pheasant's nest with eight eggs in it. In the same nest apparently unmolested are four Bobwhite quail eggs. It is not known whether or not the two birds may use the nest simultaneously. The female quail had apparently laid the eggs in the pheasant's nest without any altercation."—Game Protector Thomas F. Bell, Huntingdon County.

"On May 15, while patrolling on Farm Game Project No. 69 I stopped in a plantation of small pine trees to shoot crows, using a crow call. After calling three or four times without success I noticed a small animal moving through the pines about 20 yards from me. Thinking it was a small dog I paid no more attention to it and continued to blow the crow call. A few moments later I saw the animal again, this time crawling along very close to the ground and coming towards me. When within about 30 feet of me the animal raised up and I saw it was a grey fox. A load of No. 6 shot made one less fox in Mercer County. This was a female fox with a den of young. Evidently she thought there was a young crow on the ground and was going to pick it up if possible. The remains of at least a dozen rabbits and eight or ten ringnecks were scattered throughout this two acres of pine trees."—Game Protector Duane E. Lettie, Mercer County.

"Another deer decided to pay the city of Erie a visit this week (June 4) and to climax things he ended up in a cemetery by committing suicide. I was called to the Erie Cemetery in the city to remove a deer that was caught in a 6-foot iron fence. The deer wandered into the cemetery and when he tried to get out he got caught and I had to shoot him. He pushed his head through the pickets and could not pull it out and his shoulders, sides and hips were bare from rubbing the pickets. He weighed about 80 pounds."—Game Protector John G. Kennedy, Erie County.

"On Friday, May 24, I received a call from Deputy Trauch to go to the vicinity of Ottsville to call on Mr. Ira Burgstresser. Mr. Burgstresser had been working in his barnyard the previous afternoon and 3 young grey foxes (slightly smaller than house cats) had walked almost up to him. They were very wet and cold and he soon caught them alive. Shortly afterward the old female stuck her head through the bars of the barnyard and barked several times for her young. Mr. Burgstresser had no gun at the time and so was unable to kill her. He believed that the foxes had been driven from their den by high water from the Tohickon Creek which is only several hundred feet from his home."

"I went over on the following day, thinking that I might be able to get the remainder, but upon arriving I found that Mr. Bergstresser had already killed the old female and 2 more young. His collie dog had found a hole under the pig pen which adjoins the barnyard and he had watched this hole for only a short time before the old fox stuck her head out. I believe that this is rather unusual due to the fact that the den was not more than 100 feet from the house and separated from the barnyard by only a stone wall around it."—Game Protector Edwin W. Flexer, Bucks County.

"As the tractor was leaving one of the refuges on farm-game project No. 24, after having plowed the last food plot we were putting in, one of the wheels ran over a nest of rabbits. Several of the little felows scampered out and after a little effort we had them all corralled and back in the nest. To our surprise, we found only one dead of the six or seven that were in the nest."—Game Protector John S. Shuler, Westmoreland County.

"Have had one grouse, nest, and eggs destroyed by men cutting right-of-ways and dropping a tree on the nest."—Game Protector Levi Whippo, Warren County.

Game Protector John S. Shuler, Westmoreland County, sent in this interesting photograph of a Woodchuck that got its head stuck in a tin can and was found wandering aimlessly about the fields.

Many Rustic Ladders like the one above were erected over fences by the Erie County Sportsmen. Erecting such fences make good projects for sportsmen to improve farmer relationships.

The Cambria County Game Protective Association, Portage, Pa., would be interested to hear from sportsmen's clubs within a radius of 100 miles who are interested in forming a federation to hold coon dog field trials. It is not necessary for sportsmen's clubs that are only interested in coon hunting to belong to this federation.

This federation would be formed for sportsmanship, good fellowship and raising of funds for propagation of game. With the forming of this organization, said clubs could hold regular Sunday field trials not to conflict with one another. With regular field trials sportsmen could and would keep better field trial dogs and show more interest in field trials and raise more funds for releasing game.

A centrally located meeting place could be arranged to form this organization and draw up the rules and give a name to the organization. It would not be too late for this organization to function this summer and fall.

The Cambria County Game Protective Association held 12 successive field trials in the last three years.

All sporesmen's organizations interested should write Joseph F. Oravecz, Secretary, Cambria County Game Protective Association, Portage, Pa.

The Newport Sportsmen's Association, Perry County, trapped, banded and released five crows. Anyone who kills one of these crows receives a bounty of $2.00 by returning the band to G. R. Young, Secretary of the association, Newport. The band in turn will be used on another crow. The following inscription will be found on the band: NSA, No. 1 to 5, Newport, Pa.

Over one hundred men and women, as well as almost an equal number of children, spent an enjoyable afternoon under ideal weather conditions, when the Lower Merion Rod and Gun Club held its Annual Spring Picnic and Outing on the lovely farm of William D. Ridgway at Bethayres, Pa., on Saturday, June 15.

The children had a grand time in the swimming pool, the wives mothers, sweethearts, sisters and friends, as well as the Club members who attended, took part in the numerous games and contests which made up the busy program of the occasion; and prizes were awarded to the persons and in the events named below:

Plug Casting for Accuracy, Ernest and Elmer Jenkins of Narberth tied for first place; Plug Casting for Distance, Ernest Jenkins; Surf Casting for Distance, Walter P. Miesen; Pistol, Sherman Williams of Roxborough; Rifle, Walter Johnston of Roxborough; Water Boiling Contest, Charles Jenkins of Narberth (father of Ernest and Elmer).

Quoits, Edward Merkle and James Rennix, both of Narberth, were the winning pair; Trap Shooting, Wm. Ridgway of Bethayres; John Albrecht, Jr., of Narberth; Chas. Latch of Narberth, who tied three times for first place; David Mawhanny of Narberth; Edward Merkle of Narberth; Walter P. Miesen of Narberth; John Munro, formerly of Narberth, now of Wilmington, Delaware; and Wm. Shaw of Ardmore.

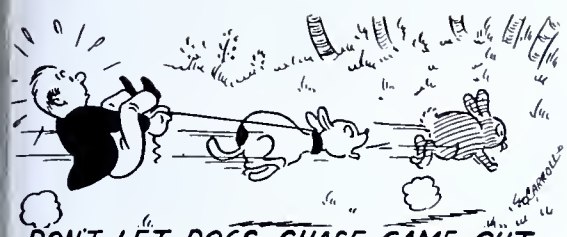
During the latter part of the afternoon a buffet supper was served under the direction of Mrs. Joseph P. White, of Narberth. Mrs. White and the Club's Picnic Committee and their wives deserve congratulations for having made of the occasion a socially and financially successful one.—Ellen A. Dietrich, Secretary.

John M. Phillips, former Game Commissioner, of Pittsburgh, told your editor an interesting story about a walnut tree. He has been buying black walnuts and giving them to the scouts to plant every year. The other day a farmer called him on the telephone and said that he noticed a group of Boy Scouts standing underneath the one and only walnut tree on his property. He thought that they were going to take the walnuts so he hailed them and was amazed to learn from the spokesman of the group that they were not interested in **his** walnuts but they had a lot of **their own** that they wanted to plant on **his** farm.

The farmer told Mr. Phillips when his chores were over that evening he sat down and reminisced a little. He remembered that most of the rail fences on his property had been hued and split from walnut by his grandfather; he remembered that the doors, panelling, wainscoting, and much of the other woodwork within the farmhouse were of walnut; and then he thought of the one remaining tree on the farm. So he gathered the nuts and planted them over his lands in the hope that some day posterity would have an opportunity to enjoy what so many people of today are failing to enjoy because their fathers and forefathers wasted too many of Mother Nature's valuable resources.

E. Oswald reports that he and his friend Lester Beck, both of Nazareth, trapped a gray fox several years ago that weighed fourteen pounds and one ounce on a certified scale and was 42 inches long.

WITH THE CLUBS



DON'T LET DOGS CHASE GAME OUT OF SEASON. PA. GAME COMMISSION.

Editor's Note: While attending a wildlife conference in Connecticut early in the year, your editor had the pleasure of renewing his acquaintance with Commissioner Francis L. Sheane of the Board of Fisheries and Game of that state. Some motion pictures we saw after a banquet one evening turned our conversation toward field trials. I was interested in a tentative program for bird dog trials with pheasants that they were trying out and asked Commissioner Sheane to give me the details. I quote from a letter he sent me recently:

"As promised during our conversation at Hartford, I am listing herewith our tentative regulations for bird dog trials with pheasants.

1. Birds of either sex may be shot.
2. Of the birds to be liberated 10% shall be reserved for liberation after the trial under the supervision of a warden on grounds recommended by him. All birds to be liberated for shooting must be released 15 minutes before shooting.
3. Immediately following the trial, all birds killed shall be presented to the agent representing the Board. Each such bird shall be tagged by such agency and there shall be a fee of $6.00 charged for the rental of a sealing device to be used in tagging the birds.
4. Only birds legally propagated by licensed game breeders may be shot.
5. Only licensed persons may shoot at birds.
6. Hunting licenses may be revoked for a period of one year for a violation of any of these regulations.

Commenting on the above, Rule No. 2 is obviously designed to aid in restocking surrounding covers. For example—in a fifty bird trial, five birds are withheld for liberation after the trial, usually upon agreement between the attending warden and the club officials.

"Rule No. 3: We intended at first to make a charge of $6.00 per day for the attending warden, but we were advised by our Attorney General that a more satisfactory arrangement would consist of supplying the official sealing device and tags for $6.00 with the warden's services gratis. Incidentally the open season for these trials is from October 1st to the last day of February, exclusive of the bird hunting season, and obviously our wardens would be busy during the bird season and we could not spare their services for supervision of field trials during this period. Permits are issued by the State Board of Fisheries and Game to regularly organize groups for such trials.

"Our regulations, as noted above, are tentative, and subject to changes which may be made to cover various conditions which may develop. Two permits were granted early this year to a club which had considerable previous experience in operating non-shooting trials, and I had the opportunity to attend on both occasions and was quite pleased with the results. The birds, usually a cock and a hen, were placed at least one hundred yards from the spectators, and two competitors with their dogs and two judges were started from behind a row of spectators' automobiles. No professional "guns" or handlers were permitted—just ordinary hunters and their dogs.

"The course covered about a quarter mile, finally winding up in the field where the birds had been previously placed. First dog to find scored a certain number of points, and the hunter's ability was also scored. From my viewpoint at least a most interesting result was noted—that an average of 30% of birds escaped unscathed during the two trials which, of course, is of considerable assistance in restocking neighboring covers; and of course everyone had a good time with various competitors joshing each other with regard to their ability as expert shots and with reference to the performance of their dogs.

"The Club had its own set of rules which were to the effect that the hunter could fire two shots, and if he missed the companion hunter could then open fire. In all cases, however, a 25c fine was charged for each miss, and a $10.00 fine was imposed for shooting in the direction of the gallery. Competitors were warned that a $50.00 fine would be exacted for shooting a dog and $25.00 for shooting a judge."

Orrie E. Smith, Game Protector, Fulton County, observed a wild turkey hen and 11 young while plowing State Game Lands No. 65 and later found a nest of 7 eggs.

Breaking his 50 16-yard targets straight, Milford Baker of Manoa, Delaware County, turned in the high score of the day at the annual spring shoot of the Philip Carson Gun Club over the Chelsea, Delaware County traps on Saturday, May 18, 1940. A. J. MacDowell finished runner-up with a card of 49.

Trophies were distributed on the added targets handicap basis, 16-yard and doubles. George Wilson won the high gun trophy on the entire card. No less than 15 members tied with totals of 50, including their added target allowances. After the second shoot-off Mrs. J. A. Lafore, Jr., won the trophy with Mob Donnelly taking down the runner-up prize.

In the open shoot Milford Baker won the trophy from William Carson after two shoot-offs. John Carson broke 24 of his 25 distance handicap clays to take that prize home. Phil Carson and Joe Carson tied with scores of 23 and divided second and third. A. J. MacDowell won the high over-all on actual breakage with a total of 94 down.—J. A. Donnelly.

A report from the National Capital Skeet Club is interesting from the standpoint that in the last four North-South Shoots over 70,000 shotgun shells were fired and not a single accident occurred. Seventy thousand rounds were fired in 8 days. Don R. Johnson, President of the organization, said that he could not give the figures representing the number of shells fired but that they run into the thousands upon thousands and he has yet to hear of a single gun accident.

NEW CLUBS

The Paisley Valley Coon Club, Carmichaels, Pa., James May, Secretary.

The above Menganser Duck tried to swallow a small "Bullhead" Catfish, but the "stingers" of the fish pierced the bird's throat and choked it to death.

Game Protector Leslie Wood, of Tioga County, submitted the above photograph of a Coyote killed by Stephen A. Clark, of Wellsboro on May 26. It was the first Coyote to have been killed in that county.

Federal Aid in Wildlife Projects

The Utah Department of Fish and Game is setting up a practical mule deer management program, to determine the year-long food requirements and preferences of the animals and the values and forage yield of native forage species utilized by deer. It recognizes that if fundamental feeding is necessary it should be done intelligently and economically, with a full knowledge of the palatability and nutritive values of the various and supplemental feeds. The U. S. Forest Service, Utah State Agricultural College, and the Biological Survey, are cooperating with the Game Department in the conduct of the investigation.

The California Fish and Game Commission has submitted plans for a comprehensive survey of the present status of beaver in California. The purpose of the survey is to gather information on which to base a sound beaver management plan that will result in the perpetuation and wise use of this valuable fur animal.

The State of Washington Fish and Game Department has proposed a program for the acquisition of an extensive scope of land to be used as an elk range and wildlife refuge; one to be used as an antelope range and refuge whereon sage hen, quail, and other important game birds will also be benefitted. Another, comprising 18,000 acres, is to be set aside as a winter deer range.

The New Jersey Fish and Game Department is vitally interested in devising some means of producing cottontail rabbits for redistribution throughout various covers in the State. There are indications that in certain areas careful management may produce rabbits in sufficient abundance to permit trapping of a surplus for redistribution. A forty acre field has been fenced and a full time investigator will be assigned to study technics, keep records, and perform other duties on the area and elsewhere, incidental to rabbit management in the State.

The North Carolina Department of Conservation and Development proposes to fence and post a deer and wild turkey refuge which has played an important part in deer conservation within the State and which now constitutes an important seed stock refuge.

The Vermont Fish and Game Service will use Federal Aid in Wildlife Restoration funds to conduct a survey of the fur resources of the Lake Champlain country. The muskrat is the most important fur animal of the region and attention will be centered upon obtaining information on methods of trapping and the economic importance of wild fur to local trappers and fur dealers. The effects of the spring trapping season on populations will be determined by a study of the breeding habits, with particular reference to average size of litters and survival rates of the young. Specimens will be collected to determine the best seasons for harvesting the fur crop.

To solve a critical deer and elk wintering problem, the Colorado Game and Fish Commission will acquire 800 acres of land in Grand County. The area under consideration now furnishes winter forage for big game animals and steps will be taken to increase the supply.

The ringneck pheasont, the sharp-tailed grouse, and the Hungarian partridge are important game species in North Dakota. The North Dakota State Game and Fish Department has submitted a Federal Aid project to study the factors influencing the survival of the three species. Information obtained from the investigation will be used in formulating sound game management practices.

The Tennessee Department of Conservation proposes a two-fold program, restoring of deer once abundant in Tennessee. The Department of Conservation will improve a deer refuge purchased under Federal Aid. Development of a dog and deer proof fence will initiate the development program on the area. A seed stock herd of fifty deer will be established and as the herd increases, surplus animals will be used as foundation stock in various parts of the State.

The Ohio Division of Conservation and Natural Resources will establish a ruffed grouse management area in the southeastern part of the State. About 1,400 acres of abandoned and submarginal farm lands will be leased and improved for the benefit of ruffed grouse, deer and small game.

The State Game and Fish Commission has submitted plans for a survey and inventory of the wildlife resources of Mississippi. Sections of the State will be studied to determine the present population and distribution of the principal game and fur species. The effects of hunting pressure, changing agricultural practices, drainage, and depletion of timber supplies will be considered in the survey, and where possible, practical methods of restoration will be outlined.

In 1939 the Idaho Fish and Game Department conducted a Federal Aid in Wildlife Restoration project to transplant beaver that were interfering with farming practices to areas where their activities would not be detrimental. The program was so successful that they have proposed the continuation of the work under a new project. This plan calls for the transplanting of an additional 1,500 beaver. All beaver will be tagged and records will be kept regarding the date, place and habitat where the beavers were caught and similar data on the place of release. The U. S. Forest Service and the Biological Survey will cooperate in this project.

The North Dakota Fish and Game Department recently submitted plans for the development of the 640 acre Morton County Upland Game Refuge near Bismarck.

Some of the State Game Refuges and National Forests in Arkansas possess excellent conditions for wild turkeys, but at the present have insufficient seed stock. To remedy this condition, the Arkansas Game and Fish Commission will use Federal Aid funds to purchase wild turkeys for release on five areas totaling one hundred sixty-seven thousand acres.

The Nebraska Game, Forest and Parks Commission has submitted a project to rehabilitate quail in the State.

On May 29 the Senate passed the Wheeler Bill (S. 3739) amending the Pittman-Robertson Act clarifying the ownership of projects completed under the provision of the Act. The Bill has heretofore been set out in full in a previous letter. Montana Federation groups will be pleased over the passage of this amendment because as a matter of fact it was introduced to cover the situation that exists there. The amendment makes clear and certain that any project completed is the property of the State and must be administered by the State. It is probable that the Bill will be passed by the House this session which will be prolonged now because of the national defense tax bill.

The Michigan Department of Conservation has reached a conclusion that their present regulations relative to the length of time game may be kept after the season is too short, and that the present regulations impose a needless hardship on law-abiding sportsmen who want to keep their legally killed game for longer periods of time.

The legislature will be asked to enact an amendment to the game laws whereby any hunter at the close of the open season could take his kill of game to the nearest district headquarters of the conservation department for registration. There it would be sealed with metal, self-locking seals. Possession of the game then would be legal as long as the seals were attached.

PENNSYLVANIA GAME COMMISSION

Resident and Non-Resident Hunters' Licenses Years 1937-1938

COUNTY	RESIDENT		NON-RESIDENT	
	1937	1938	1937	1938
Adams	3962	4394	58	53
Allegheny	42228	46539	86	80
Armstrong	8285	9649	27	39
Beaver	9277	9860	97	92
Bedford	6111	6512	134	128
Berks	18061	19347	11	20
Blair	12164	13274	22	33
Bradford	6346	7350	146	96
Bucks	9103	8647	131	134
Butler	9119	9959	76	90
Cambria	17473	19071	22	20
Cameron	1332	1334	234	240
Carbon	5425	5537	10	19
Centre	8461	9133	53	22
Chester	10269	11157	52	60
Clarion	6265	7010	102	160
Clearfield	11174	11954	155	149
Clinton	5547	5931	84	80
Columbia	5909	6197	17	14
Crawford	9081	10707	115	114
Cumberland	6904	8186	9	13
Dauphin	12223	13752	39	40
Delaware	8235	6599	26	39
Elk	5230	5425	184	107
Erie	12774	15020	158	160
Fayette	14029	14075	50	56
Forest	2649	1550	132	139
Franklin	5319	7613	56	90
Fulton	2270	1917	13	24
Greene	2946	3861	20	20
Huntingdon	5732	6025	44	50
Indiana	9418	10521	46	60
Jefferson	7711	8834	97	136
Juniata	2214	2462	10	15
Lackawanna	12192	13512	23	31
Lancaster	18451	21037	19	30
Lawrence	8037	9104	328	322
Lebanon	6615	8152	8	9
Lehigh	10006	10434	41	35
Luzerne	23207	26019	37	37
Lycoming	10396	11537	80	86
McKean	9140	9733	551	452
Mercer	9609	10457	416	438
Mifflin	5424	5933	24	18
Monroe	4794	4853	237	203
Montgomery	18169	18478	12	20
Montour	1664	1798	7	8
Northampton	12563	13351	149	160
Northumberland	10105	10342	6	7
Perry	2801	3283	8	13
Philadelphia	15173	17630	192	171
Pike	1663	1554	647	512
Potter	3758	4171	483	384
Schuylkill	14265	16390	4	5
Snyder	2421	2606	1	6
Somerset	9070	9825	31	61
Sullivan	1352	1347	22	14
Susquehanna	3155	3795	84	52
Tioga	5497	5737	270	190
Union	2944	4007	13	14
Venango	7329	8234	164	246
Warren	5440	5861	391	423
Washington	13691	16243	80	100
Wayne	3603	3574	95	90
Westmoreland	22893	25145	94	65
Wyoming	2360	2447	12	18
York	13925	16020	40	40
Department of Revenuc	3303	2135	1272	732
TOTAL	598261	654146	8357	7584

PENNSYLVANIA GAME COMMISSION — COMPARATIVE STATEMENT
LANDS OWNED AND CONTROLLED

DIVISION	May 31, 1930 (Acres)	May 31, 1934 (Acres)	May 31, 1938 (Acres)	May 31, 1940 (Acres)
A	17,473	21,416	60 800	107,201
B	27,650	46,309	77,082	119,441
C	54,631	125,667	144,397	157,391
D	33 751	66,535	109,165	129,211
E	117,513	185 739	203,077	225,423
F	30,383	55,224	79,267	103,909
G	31,793	29,416	79,374	113,883
Total	313,194	530,306	753,162	956,459

When released from suppression, Wild Grapes grow in profusion.

The Game Commission Improves its Land Holdings

(Continued from Page 5)

ing, the rights of both the landowner and the hunter protected, and sportsmen and landowners guided in a cooperative set-up, the Commission in 1936 inaugurated its Cooperative Farm-Game Program, explained in some detail in previous issues of the *Game News*. The program was intended not only as demonstration areas, but also to improve hunting conditions in the more intensively-cultivated and thickly populated sections in the southeastern part of the State near Philadelphia, and in the southwestern part near Pittsburgh.

During the hunting season of 1938, an estimated 20,767 hunters spent 41,534 hunter-days on the 59 Cooperative Farm-Game Projects, which totalled 73,825 acres during that hunting season. It is estimated that 73,034 pieces of game were killed on these projects, or approximately one piece per acre.

During the hunting season of 1939 an estimated 41,100 hunters enjoyed the 83 Cooperative Farm-Game Propects which totalled 131,467 acres in that season. Of this area 94,628 acres were open to hunting and the remainder consisted of Safety Zones, numbering 1,625, and in Refuge units, numbering 891. An estimate of the game kill during the season reached a total of 64,192, which is one piece of game for every two acres of the total project area, or one piece for every 1½ acre of area open to public hunting.

During the 1938 season, 9,360 pieces of game were released on the projects, and during the 1939 season 8,112 pieces.

More than 100 acres of game food plots were either purchased or planted in small areas on these Farm-Game Projects each year of the biennium. The plots were small in size, and well scattered in order to offer maximum benefits to the wildlife on the area. Winter feeding was carried on where necessary on the projects, and during the hunting seasons Deputy Game Protectors were employed to patrol the areas.

Special Wildlife Projects

An act of the 1939 Legislature provides for the creation of such Special Wildlife Refuge Projects "as may be sponsored, established, and maintained by any regular sportsmen's organization working in behalf of the public interest and the conservation of wildlife with the written consent and approval of the owner, or lessee, or other persons in responsible control of the land as utilized, to cooperate with the Pennsylvania Game Commission in the furtherance of its game management program."

Final plans for the above set-up were not completed until early August, 1939, and the deadline for establishing projects is fixed by law for October 1st. Twenty-nine projects in 20 different counties were signed up and established last fall, the 29 projects aggregating, 17,458 acres, with 2,570 acres in 34 refuges, and 38 safety zones, totalling 378 acres, leaving 14,510 acres open to public hunting. Six new projects totalling 1,500 acres were added in 1940. A number of additional ones are under consideration.

For the sake of uniformity, the Game Commission furnishes the application and agreement forms as well as the refuge and safety zone posters. The only regular expenditure by the Commission consists of safety zone and refuge posters. Fifty thousand of each were produced, at a very nominal cost, by a WPA project located in Harrisburg. Field men of the Commission assist, in connection with their regular duties, in the protection of the projects, and in furnishing advice and information on establishment and development.

At the end of the year a questionnaire was mailed to the different clubs that sponsored projects in 1939, and from the returns (about 70%) the following information was gathered: One-half of the clubs planned to expand present projects and also establish new ones. All the lessors agreed to allow fence rows, stream banks, etc., to grow and to cooperate with the organizations in planting such material as grains, trees, and shrubs. No violations of refuges or safety zones were reported. Nearly all organizations reported that they were carrying out systematic winter feeding where there was a deficiency in natural foods. All reports had the highest praise for the program.

The future of this new program under proper management and control seems to be unlimited. The educational value to the public alone is tremendous, and should provide an enormous return to the sportsmen and the cooperating landowners in succeeding years. The future

Gates like these guard certain remote roads into Game Lands to give Wildlife further protection.

value to sportsmen, if the program becomes widespread enough in the small game counties, will be in the leftover seed stock from the refuges and the new hunting areas that will be opened up, relieving pressure on territory now open. The game feeding, planting, and cooperation of the landowner will also pay big dividends in increased wildlife populations. It likewise has great possibilities in creating a better farmer-sportsman relationship.

Looking Ahead

The policy of the Game Commission is to do everything possible through its Division of Game Land Management, to improve the living conditions for wildlife on all areas under its control. The Commission, therefore, plans to continue the expansion of developmental activities as extensively as possible with funds which can be budgeted for the purpose, and with the use of relief labor. The Commission likewise will continue to cooperate with other Federal agencies, such as the Soil Conservation Service and the Agricultural Adjustment Administration.

It is obviously impossible for the Commission to do everything necessary on all lands. Others interested in the program must help if we are to continue to maintain our present abundance of wildlife. It is very pleasing to the Commission to find that a great many organizations have been quite active in this connection during the past few years. Many are establishing Special Wildlife Projects, raising game birds, planting food plots, carrying on winter feeding activities, controlling predators, and operating other useful projects. It is only through the combined activities of all interested groups that the maximum results can be obtained.

Various relief agencies have helped to improve roads, trails, and general conditions for Wildlife immeasurably.

THE COOPERATIVE FARM - GAME PROGRAM

The Commission's Cooperative Farm-Game Program is now being conducted on a much more selective basis than was the case during the first few years. The plan has worked out exceedingly well, evidenced by the innumerable favorable reports from both landowners and sportsmen after each of the past several hunting seasons. Now, however, the opinion seems more or less general that greater effort should be put forth to give the Special Wildlife Project Program a thorough try-out. This latter program is somewhat similar to the Cooperative Farm-Game Program with the exception that agreements covering the hunting rights of groups of farms, or in fact any lands, are between the landowners and sportsmen's organizations; whereas in the Cooperative Farm-Game Program, the agreements are between landowners and the Game Commission. In other words, this Special Wildlife Project Program is *the sportsmen's own plan*, and every association should try to develop one or more of them in their vicinity because it is applicable to the entire State.

In compliance with the Commission's instructions, efforts are being made to expand Cooperative Farm-Game Units which now have an area of less than 1,000 acres. The intent is to increase those units to a more economical size, both from the standpoint of protection and game management. In addition, consideration is being given to the advisability of establishing a few new projects in several of the twenty-seven counties in which the program is applicable. Extreme care, in this connection, is being exercised in selecting the best locations or sites.

At the present time, there are 84 projects established in 26 of the Cooperative Farm-Game Counties. They comprise 1636 farms, with a total of 135,552 acres. Philadelphia is the only county in which no project has been established, and it is thought that there is scarcely no possibility of securing one in this county.

Since the Farm-Game Program was adopted in 1936, the Commission secured agreements covering a total of 137,768 acres. During that time, due to the sale of farms and for other permissible reasons, there has been a reduction by cancellation of agreements of 2,216 acres, or only 1½% of the total area leased. This loss, spread over a four-year period, is so small that it is evident proof of the satisfaction with which the plan has been received by farmers and sportsmen alike.—R. A. McCachran.

In a quick dragnet action that took wild duck bootleggers in Tennessee, Arkansas, and Mississippi unawares, 110 sellers of migratory waterfowl were recently brought into State and Federal courts and received an aggregate of more than $4,500 in fines and 280 days in jail. The cases were the result of almost 8 months of intensive undercover investigations by Biological Survey game management agents and State game officers.

Food Plots planted adjacent to woodland cover are extensively used by Wildlife.

FOX HUNTING NOTES

« « « By W. Newbold Ely, Jr., M.F.H.

MR VOIGHT reecntly had some very interesting notes in Spur bout the hunts pursuing other quarry than the fox:

"So it is that, out the plains country, from the muddy waters of the Missouri River westward to the Rampart Range of the Rockies, and from the meandering flow of the Platte south to the Mexican border, gentlemen and ladies, who would cultivate or retain a true hunter's seat and wind-beaten cheeks, have taken quite philosophically—if not naturally—to such quarry as is to be had.

"Of the more than one hundred accredited hunts, listed in the most recent Roster of the Hunts of American, at least six tell of chasing coyotes almost exclusively; a seventh advises that it devotes much of its time to hunting wildcats and wild bears; and an eighth names the mountain lion as its part-time quarry.

"While the coyote hunt has the edge on other American deviations of the formal chase, it by no means has a complete monopoly. Out of Fort Bliss, near El Paso, Texas, the First Cavalry Division Hunt has at its disposal an almost unlimited wild range type country that takes in a couple of mountain chains and the high Hueco plateau as well as miles upon miles of open prairie. In the more rugged areas are mountain lions as well as coyotes.

"Down South, the Infantry School Hunt at Fort Benning, Georgia —the only hunt outside of coyote territory that is here considered— the military sportsmen appear deliberately to have developed variations of the chase, despite a comparative plenty of red and gray foxes.

"Here the hunt practically riots in variety. Last season alone, the hunt brought to bay eight bobcats, thirteen boars, and a number of 'coons, in addition to several foxes. Major H. M. Henderson, Master of Fox Hounds, tells that the hounds for some years have shown little discrimination, but will run either foxes or wildcats as they happen to strike trail. The cats usually stay fairly close to the swamplands, and run in short circles that do not provide a great deal of action for the horsemen. The thrill lies in the music of the hounds on the line. On the last hunt of the year two bobcats were routed from cover and killed after runs of about an hour each.

"A professional huntsman and whippers-in are employed, and the kennels are established on the broad acres of the Diamond K Ranch. The field is composed largely of the sons and daughters and grandchildren of the families known in the earlier era as Empire Builders of the West. Weekdays they are railroad, mining and banking folk, but week-ends they are simply correctly garbed and mounted sports-lovers out to try their darndest to run down an amazingly cunning quary.

"In the field will be found the customary scattering of young men and women from the ranch houses that here and there dot the wide sweep of open hunting country. These youngsters give the first clew to the visitor that the hunting isn't going to be quite the same as at, say, the Cheshire Hunt, near Unionville, Pennsylvania, where Plunket Stewart is Master. For the Arapahoe Hunts' rural guests are clad in cowboy boots with high heels, wear broad-brimmed sombreros and dungarees, and sit typical Western saddles cinched onto hardy cow ponies.

"Out of sight of the kennels, the absence of close vegetation makes one wonder where game possibly could be found and, if it exists there, how and on what it could survive. For the terrain looks bare and uninviting to any sort of life. The prairie rolls and billows on all sides like a lazily swelling sea. Here and there it is cut by gulches that are dry as a bone except during the spring thaw. Occasional cotton-woods and dwarf willows suck a precarious living from the forbidding soil, but foiliage appears plentiful only on the slopes of the distant mountains.

"A tough, wiry grass grows in summer, and occasionally the way lies along the stubble of a last year's wheatfield. The going underfoot becomes a bit rocky in spots, and cactus makes its appearance here and there. This isn't the treelike cactus of Arizona, but the dwarfed, groundhugging type that Texans call prickly pear.

"Shortly after the field meets, a wily old dog coyote's trail is picked up in one of the all but invisible paths, or runs, which he frequents in his never ending hunt for prairie rabbits for food. The hounds may follow two or three miles of fairly cold trail before approaching close enough to provide an occasional sight of the quarry ghosting in and out of incredibly thin cover.

"Efforts have been made by some of the Western hunts to import foxes, but these invariably have ended in failure. The Artillery Hunt tried this some years ago at Fort Sill, but the foxes simply couldn't adapt themselves to the living conditions found on the slopes of the old granite hills called the Wichita Mountains, or on the plains where they had to compete with the coyotes for a livelihood. Similar attempts of the Cavalry School at Fort Riley ended in failure."

ORIGIN OF FLOODS

« « By Capt. G. W. Dillin

IT is a matter of record that William Penn, who was the founder of Pennsylvania, included in his recommendations to home seekers, that from an economic standpoint, it would be the part of wisdom to retain forever in Forest, not less than one-fourth of all lands opened to settlement and that this one-fourth thus retained be on the hillside or on stony parts that were not well adapted to agricultural pursuits. The recommendations though timely and wise, were not heeded.

The settler was given a free hand and he abused the privilege to an unreasonable degree, and I will here add that in all probability no nation ever made a more costly error in its pioneer development. In recent years we have passed through flood conditions unparalled in our history, A heavy toll has been taken of human life and a property destruction that mounts into staggering figures. Pennsylvania, by reason of its geographical position and its natural formation has sustained the greater losses when compared with other states located within the flood zone.

It is also by reason of those same natural conditions the greatest contributor to the fun of destruction. Floods are caused by water that runs from land that will not hold it in check by absorption. Both farm and woodlands are contributors, but the latter is compartively small; in either instance, the steeper the hillside the greater the run off. Briefly, I will attempt an analysis of the situation in our State of Pennsylvania. We have about nine million acres of mountain lands, better known as the unseated districts. There is also about three million acres included in farm enclosures.

Now a word on the part the mountain system plays in the matter of floods. The several great rivers of Pennsylvania are formed mainly by the multitude of springs that rise in the mountains and foot hills. These springs flow into streams that eventually reach the rivers and become the integral part. It has not been so long ago that our great mountain system was clothed with heavy forest. The great conifers and hard woods seemed endless and inexhaustible. The humus covering of leaf mold was from three to seven inches deep—a great sponge-like carpet that not only retained the rainfall and the melting snow, but also held in check the biting frost, reducing its grip on mother earth to a negative quantity. Thus no excessive run-off was possible and as a matter of reason the supply of water necessary for a constant spring flow was retained in nature's great storehouse, the forest.

But a change came—the lumbermen and tanners stripped the mountains and hills of their giant trees. The forest fire that followed completed the destruction. In a comparatively short time our great mountain system was stripped of its all. Sixty years after the commercial invasion, seventy percent of our mountain area was reduced to desert, a breeding ground for floods and a prolific contributor to the cause of a diminished summer water supply that has become too often a serious state problem. Greed, ignorance and the appalling indifference of our State Government that prevailed a few decades ago, doubtless added much to the serious conditions of today. Seeds of destruction were sown; the seeds have grown and have contributed enormously to the amazing harvest we now behold.

NOTES FROM THE FIELD

"A check of the song and insectivorous birds that nested at No. 33 Headquarters shows a return of all species except the flickers and waxwings."—Game Protector Elmer Pilling, Centre County.

As of May 27 Roland Turley, Game Protector, Bedford County, reported 9 turkey hens hatching at Propagating Area No. 4. The first young turkeys within the Propagation Area on State Game Lands No. 92 were observed on May 25. There were two hens with four and five chicks respectively.

"On May 21 we had a forest fire near Game Lands No. 63. Many little rabbits and a number of grouse emerged from the flames and after the fire died out I stayed to locate nests and young birds but did not find any."—Edward Shaw, Game Protector, Clarion County.

Raymond M. Sickles, Game Protector, Crawford County, writes on May 27 that several young broods of ducks have been seen and one Canadian goose has hatched out 8 young.

"Guide for Trapping and Care and Marketing of Raw Furs" is owned, published and distributed by The Animal Trap Company of America at 50c each, postage paid. This guide contains a wealth of information on care of trapping equipment and shows how to avoid waste in preparing pelts for market. We stated in the May issue that this book was being sold by Harry LaDue. We are glad to make the above correction.

"Some men from Glen Valley Camp near here today brought me a fawn and told how they had found it. They were going up Jordan Run where they saw something struggling ahead which they thought were two foxes. Upon going closer they found a fox trying to kill a fawn. Upon seeing them the fox ran. They did not see the mother of the fawn and did not know what to do, so they brought it to me. As the fawn was unhurt I asked them to take it back where they found it as no doubt the mother was not far off. This they did."—Game Protector Ernest Hunsinger, Potter County.

"While going over turkey area No. 1, S. G. R., No. 504-A, I came upon a 5½ foot blacksnake that had been inside the area and attempted to crawl out and in doing so crawled about 12 inches through an inch mesh of poultry netting, got tight and in making an attempt to free itself interwove itself through six of the inch meshes and became so tight it died in the attempt. I do not see how it was able to weave itself so tightly into the wire because I had a stick and tried to remove it but could not. The remainder of its body was too thick to pass through the inch mesh. According to the way the leaves were torn around it must have put up a desperate struggle to free itself."—Game Protector Harold E. Russell, Perry County.

"This is the one that was almost shot by poor Mortimer . . . rest his soul!"

Several wildlife experts of the Texas Game, Fish and Oyster Commission will lecture before classes in the conservation of natural resources at the 24 Texas colleges which will offer the course, this summer. Nine other states and federal agencies will cooperate in the course which has proved so popular that it has, in three years, grown from a one-insttiution affair to the point where two dozen schools are presenting the study of the needs of natural resource conservation.

Trappers in the United States send approximately $65,000,000,000 worth of furs to markets every year.

More than 554,000 pelts worth more than $1,910,000 weer shipped from Alaska to fur centers in the United States last year, according to the Biological Survey. The average value of the pelts taken from fifteen kinds of fur animals ranged from 5c for hares to $37.50 for lynxes. This represents the work of some 8,000 trappers.

SUMMARY OF THE LANDS OWNED AND CONTROLLED BY THE GAME COMMISSION MAY 31, 1940

	Total Area (Acres)	Refuges No.	Refuges Acres	Open Hunting (Acres)
State Game Lands (152 Blocks)	636,680	154	59,657	577,023
Primary Refuges on Other Public Lands (84)	62,543	84	62,543	18,235xx
	18,235xx			
(Total State Forests 1,654,806)				
(Total Allegheny National Forest 431,502)				
Auxiliary State Game Refuge Projects				
General Classification (61)	54,584	71	14,212	40,372
Farm-Game Classification (84)	135,551	880	7,010	98,402*
Special Wildlife Refuge Projects (35)	18,983	42	2,702	15,816**
Dog Training (4) and Archery Preserves (2)	4,920			
	# (2,935)			
Game Propagation Areas (75) (Exclusive of Wild Turkey Areas)	26,948	75	26,948	
495 Separate Blocks located in 66 Counties.	956,459	1,306	173,072	749,848

* 1,656 Safety Zones total 30,139 acres.
** 45 Safety Zones total 465 acres.
# 2 Preserves located on State Game Lands total 1,985 acres.
xx The 18,235 acres represent the open hunting area on Tobyhanna Military Reservation, in addition to the 3 refuges leased from the U. S. War Department.

W.P.A. planting Ringneck Pheasant holding pen of the Erie County Sportsmen's Association.

GROUSE TALK

By MARSHALL BELL

Ability of ruffed grouse to survive and hold their own in many covers, in defiance of relentless pursuit by all kinds of enemies, is to me one of the very wonderful and interesting subjects in connection with reflections and reminiscences on wildlife. Never have I seen a more interesting example of this than during a part of the open season just past, and I trust that what I am about to relate may give cheer to some of those who fear the grouse is doomed to early extinction.

Some 35 years ago, the valley of a certain large creek and its tributaries, not over 20 to 25 miles distant from one of our large industrial centers in Pennsylvania, was one of my favorite hunting grounds. The surrounding grapevine clad hillsides were and still are prodigiously steep and rough, but the birds were there. In those days of no bag limits or very liberal ones, the hard hunting conditions were disregarded. In those days this section was what we would now call inaccessible, in terms of modern transportation. Our approach was then by train to the nearest station and then walk or take a buggy for 6 to 8 miles. We thought nothing of long walks and drives to the hunting ground and the size of the bag usually fully repaid the effort. But to come to the point; ground was being broken at the railway station nearest to our hunting territory for tremendous manufacturing plants, and a large acreage still nearer was being laid out for company towns, so my brother and I abandoned this locality and for many years transferred our grouse activities to more distant places.

Since that time, the population immediately adjacent to the old hunting ground has increased many hundred fold, the former country roads that led to it are now a network of modern highways, and the setting for complete extermination of game has been exactly right for a long time.

This fall, having heard poor reports as to the prospect for birds in our usual places, and with the size of the legal bag so small anyhow, we decided to hunt comfortably closer to home and within easy driving distance back and forth each day.

Out of curiosity we began by revisiting the old hunting ground of our more youthful days just to look it over. Upon visiting the old likely spots is was a very great surprise and gratification to find very nearly, if not altogether as many birds in those hills as when we had left that country many, many years ago. Considering the changed conditions as to increased nearby population, ease of access, and the ever increasing deluge of hunters from thousands of new homes a few miles distant, it seems almost incredible that we found birds in spots in their former quantities. On some days we raised as many or more birds as in those times when our coats were pretty heavy at the end of a day.

But now comes the explanation. With all those birds around we failed to get our modest legal daily limit with any degree of regularity, simply because it was almost impossible to approach within shooting range. For many years I have stoutly maintained that the grouse is gradually but surely becoming a wilder bird by nature. Year after year certainly a large part of those left over from the open season have survived by reason of their wilder and more nervous individual temperament. Is it not reasonable to assume that these individual characteristics are transmitted to their offspring through natural influences of heredity?

As fast dogs and fast horses are products of careful selection of their ancestors for speed, so, I claim, are grouse becoming gradually wilder through natural selection, based on the survival of the fittest. There is no doubt in my mind that the average grouse of today is a far wilder bird than were its ancestors 20, 10, or even 5 years ago, and that in time it may become so unapproachable as the present day prairie chicken. We would at times raise ten or a dozen birds in a comparatively short distance without getting within range of any of them and in the case of the few that lay close before the point, most of them had one leg previously broken by some other hunter, which made them loathe to rise.

If this self developed instinct of increasing wildness continues in the future as I think it has in the comparatively recent past, the gunner will never exterminate the grouse. For my part I hope he may become wilder and wilder from year to year and survive forever. After 45 years of chasing this splendid bird I am ready to admit that he is getting too smart for me, and more power to him. At least if we can not get within shooting distance of him we will not suffer the remorse which comes each season in seeing badly wounded birds fly on. It is a deep satisfaction to know, from the experience of last fall, that the grouse in the old hunting ground referred to have held their own against all comers and under the most trying conditions. It is my opinion that they will last in interesting quantities in the steeper and more rugged covers as long as do the wooded hills in which they live.

Phenology » » an Aid to Wildlife Management

(Continued from Page 8)

tify common wildflowers is the outstanding requisites for qualification. Any person or society interested in assisting in this study is invited to correspond with the Executive Secretary, Committee on Education and Participation in Science, American Philosophical Society, 104 South Fifth Street, Philadelphia.

To collect phenological data on wild flowers and animals will give point to many a ramble through the woods or fields for many people. After all, in these troubled times there is nothing better than active participation in an enjoyable and profitable study to clear our minds for awhile of undesirable subjects.

THE READING BUCK

(Continued from Page 12)

thought he had struck that crippled deer that had been hanging around his farm. One rainy night coming home a deer had crossed the road but its foot had slipped and his car had bumped it. Going down to where it had happened, and in the woods some distance Jim found the decaying carcass of Molly. which he buried. But Mike still came back at intervals, by this time a nice big buck, but at the first crack of the guns in he would come either to the wagon shed or the alders along the creek, until after the danger was over.

Then came last fall. Old Jim was out doing some chores and hearing a shot in the little cove meant nothing to him until, looking up, he saw the once proud and alert Mike painfully dragging himself toward his faithful refuge, the wagon shed, which he barely made, falling as he got in. Poor Jim did not know what to do but covered him

up with straw. Jim was up early the next morning to see if anything could be done. About that time you fellows put in your appearance. Now, can you wonder why Jim was mad, fellows? According to law that buck is the Baron's, but which one of you wants to ask Old Jim for it?" "I do feel a little cheap, said the Baron, "but remember it was a legal buck and was on State land, and I knew nothing about it being Old Jim's pet."

Well, we left the matter in George's hands, knowing he would work it out some way. Sure enough that night up came George with the Reading Buck on the running board of his car, and what a beauty he was. "Well," said George, "Old Jim feels better now after I explained that you fellows did not know that Mike was a privileged buck and no doubt would not have shot him, but I would suggest that you have the head mounted and give it to him for his continued good will." So just recently we took it out to him. It now adorns his living room wall and in our hearts is a hallowed spot for an intelligent animal and a man with a seemingly rough exterior but a kind, true heart within.

A young deer jumped through the glass door of the Post Office in Elkins Park recently. Startled passersby gaped in amanzement as the deer, appearing from the direction of a quarry up the highway, raced across Old York Road, near Church Road, and, as if in panic, headed straight for the door.

"He crashed right through the full-length plate-glass panel," reported Thomas Hoffman, 16, of 8019 York Road.

Ogontz firemen and police rescued the cut and bleeding animal and hustled it off to a veterinarian.

A REVIEW

The new book on Building Bird Houses by Paul V. Champion, published by the Bruce Publishing Company, Milwaukee, for $1.25 is not only well illustrated but contains a great many line plates showing just how to construct various types of houses. The construction directions are simple and easy to follow and are so completely supplemented by clear working drawings that the most inexperienced craftsman will have little difficulty in following them. Mr. Champion gives directions for placing the houses intelligently, too, providing excellent photos showing them in place, and he tells how to keep them clean for the comfort of their occupants. Much of the interesting information about birds which he has gathered finds its way into the discussions which precede the construction directions of each house.

Harold E. Russell, Game Protector, Perry County, saw an old turkey hen with eight young on Friday, May 24.

The development of 8,494 small water areas in three southern Provinces of Canada, under a program sponsored by the Dominion Government with the passage of the Prairie Farm Rehabilitation Act of 1935, is an important supplement to the national waterfowl refuge program in the North Central United States, according to the Bureau of Biological Survey in a report to Secretary of the Interior Harold L. Ickes.

"Last Monday I killed a 5-foot blacksnake back of the tool house on State Game Lands No. 95. This snake contained a half-grown rabbit. The same day the WPA men saw one near Ferris and killed it while it was taking eggs from a grouse nest. Eight eggs remained in the nest but several were in the snake. I checked the nest the next day and the grouse was back setting on the nest, and incidentally a buzzard was eating the dead snake."—Game Protector Rodney Schmid, Butler County.

If Boy Scouts, 4-H Clubs and Future Farmers of America groups wish to make a little extra money on the side, they might be able to do so by raising gourds and selling them for bird houses. This suggestion comes from John M. Phillips, pioneer conservationist, of Pittsburgh, who told the editor recently that a number of Scout Troops in his district were employing their spare time in this manner to good financial advantage.

The Ford City Sportsmen's Club, Armstrong County, has been doing some planting of duck foods in marshy spots along Glade Run, Crooked Creek and the Allegheny River. Nine different sites were planted to 300 duck potatoes, 300 burr reed and two pounds of duck corn. This is a very worthwhile experiment, and it undoubtedly will help the interested sportsmen to find out what species of duck foods will grow in the swamps and flooded areas along the Allepheny River basin, so that future management plans can be formulated accordingly.

The bald eagle, emblem of our liberties, will, as soon as the bill (H.R. 4832) is signed by the President, be protected. This ends the long fight to protect this famous American bird. Strict penalties are provided for killing one of them under the provisions of the bill just passed.

Biological Survey agents and enforcement officers, officers and employees of the Park Service, and officers and employees of the Grazing Service assigned to field service may no longer be assaulted or killed without having their assailants or murderers dealt with under the law. A bill (H.R. 7019) passed by the House was amended by the Senate to include the above classes of Federal employees. The bill passed the Senate without a dissenting vote.

While patroling in Warsaw township Friday, May 17, I used a crow call to try and kill a few crows, and in doing so called in a female goshawk which I killed. I stood at the same location for about 5 minutes and used the call again and the male goshawk came in and I killed it. I am getting the pair of them mounted.—Game Protector William A. Hodge, Jefferson County.

The New Kensington Field Trial Association is distributing hundreds of the Commission's leaflets on the Flushing Bar to interested farmers through the cooperation of rural mail carriers.

Jack Miner, famous protector of Waterfowl, with two Whistling Swans at his Kingsville, Ontario, Sanctuary.

BEWARE OF THE DOG

TO the tourists from the East, there was something crisp and electric in the air about that service station in the Rocky Mountain foothills. All that morning they had been almost as peppy as the beautiful pups that were frolicking and growling and chewing at each other in the sun near the gas pumps.

The pups were beautiful. Cute and fluffy, they looked like a cross between a chow and a police dog. "Aren't they gorgeous!" exclaimed the pretty young wife of the man at the wheel. She began to fondle the baby animals.

"Are they for sale?" her husband asked the attendant. They were. The price was unbelievably low. When the car drove Eastward, a pair of pups went along.

Nobody could deny that those canines were full of life. They were delightfully and amazingly healthy. In no time at all they began to chase the chickens, ducks and young turkeys on the Pennsylvania country estate of their new owners. Puppy exuberance, people said at first—until the fowl began to get killed. Then their master tried leading them on a leash through the chicken yard, tying them up. Nothing worked.

The climax came when they were only four months old. An uproar in the barnyard, a squealing, grunting, growling riot of action brought startled humans on the run—to discover the two "dogs" ruthlessly attacking the young of an old sow.

"They're not dogs, they're devils!" their master exclaimed. Investigation proved him half right. They weren't devils, but neither were they dogs. They were coyotes—long and familiarly known as the prairie wolf of the United States.

Dr. I. N. Gabrielson, Chief of the Bureau of Biological Survey of the United States Department of the Interior, declares the incident so truly represents hundreds of other actual cases, that the Eastern part of the United States is being overrun with this dangerous and destructive animal. Annually Eastern tourists are bringing home coyote puppies, believing them to be some lovely breed of dog. The puppies grow up, run wild and destroy domestic animals and fowl.

Appearing not long ago before a Congressional committee, Dr. Gabrielson testified that reports of damage caused by coyotes lately had been received from New York, Pennsylvania, New Jersey and Virginia. Within the last decade the animals also have been found in Maine, Alabama, South Carolina, Georgia, Florida and Tennessee. They are reported to be on the increase.

So real is this menace that just a year ago, the New Jersey State Legislature fixed a penalty of $100 for liberating a coyote in the State, or possessing a live coyote without official permission.

"It may appear fantastic to relate a story about coyotes in thickly-populated New Jersey," says Ernest M. Mills, head of the U. S. Biological Survey station at New Brunswick, N. J., "but the story is a true one.

"It begins in the summer of 1938 in the vicinity of Stockton, near Trenton, when W. A. Cray, a poultryman, found many of his chickens dead, killed by some overnight marauder. The losses of Mr. Cray continued during the summer and fall. Neighbors also sustained losses. Howls were heard at night, and it was reported that 130 pheasants, about 14 weeks old, were killed on one farm.

"A posse of farmers and sportsmen finally was organized. They killed a 75-pound specimen, which experts call a cross between a coyote and a police dog. Mounted, it is on view in a sporting goods store at Plainfield, N. J. A second hunt netted another animal, reported to be a cross between a chow and a coyote, which was sent to the American Museum of Natural History.

"Early last year a third animal was captured near Ringoes, N. J., and identified by Dr. E. W. Smillie, of the Rockefeller Institute, as a female coyote. It weighed around 27 pounds, and now is on exhibit at the New Jersey State Museum at Trenton."

Lately, the howling animals seem to have disappeared from their New Jersey haunts, but all spring a careful watch has been kept for them.

One of the most difficult phases of the situation is that dogs cannot always be trusted to hunt coyotes. As pointed out by Dr. Gabrielson, the coyote virtually is a wild dog and breeds with domestic dogs. Domestic dogs frequently not only will refuse to injure the female coyote, but actually will guard and assist in rearing her young. In appearance the true coyote resembles the typical wolf, the fur being a dull yellowish gray with dark—even black—spots.

Dr. Gabrielson warns tourists to be careful. Literally hundreds of coyote pups are brought East each year by unsuspecting motorists, he says.

"When you buy a puppy," he suggests, "be sure it's a dog you get."—Philadelphia Inquirer.

Boy Scouts in Conservation

(Contiued from Page 16)

invited to sit in and answer any questions which might arise about the program. In this manner the enthusiasm for the work is being maintained at a high level and it is a certainty that at the end of the period involved on March 31st, 1941 an unpredictable amount of real practical conservation work will have been accomplished in Berks County.

The Berks County Chapter of the Izaak Walton League of America will welcome any questions, comments, criticisms or suggestions and if these are addressed to W. F. Goddard, at 1012 Washington Street, Reading, Pa., they will be referred to the proper party and a prompt reply will be sent if this is required.

"Recently two local boys turned over to me four very young opossums. These animals were picked up in the woods near the remains of their dead mother, which had been shot. Five other young had died and were laying nearby. The four live ones had, from all appearances, fed from the mother until the milk was gone, then began feeding on her flesh."—Game Protector Robert D. Parlaman, Washington County.

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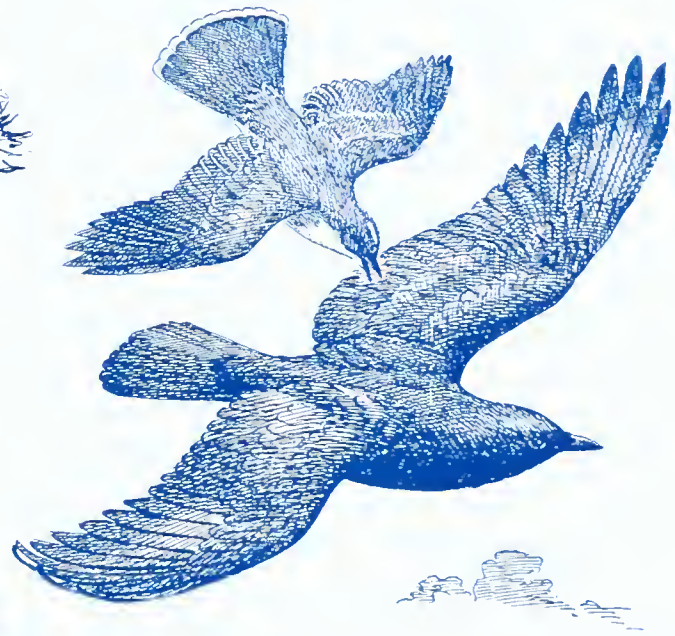
THE KINGBIRD

IT IS A FAMILIAR FIGURE ALONG FENCE ROWS, AND IN ORCHARDS, WHERE IT KEEPS A SHARP LOOKOUT FOR FLYING INSECTS. ITS WHITE-EDGED TAIL IS A GOOD FIELD MARK.

IT IS A STRONG FLIER AND FEEDS ALMOST ENTIRELY ON INSECTS CAPTURED ON THE WING.

IT BUILDS A LARGE BULKY NEST AND THE PARENTS MUST CATCH MANY INSECTS TO KEEP THE THREE OR FOUR HUNGRY MOUTHS SUPPLIED.



IT WELL DESERVES ITS NAME, AS NO LARGE BIRD, CROW OR HAWK IS ALLOWED NEAR THE NEST, BUT IS PROMPTLY DRIVEN AWAY.

IT REMAINS WITH US ONLY FOUR MONTHS FROM EARLY MAY TO SEPTEMBER, THEN RETURNS TO ITS WINTER HOME IN CENTRAL AND SOUTH AMERICA.

E.L. POOLE.

Wildlife Syndicate—1940

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The Special Wildlife Refuge Program

SEE YOUR FARMER FRIENDS

NOW!

PENNSYLVANIA GAME NEWS

AUGUST 1940

TEN CENTS

PENNSYLVANIA GAME NEWS

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VOL. XI, No. 5

EDITORIAL

AUGUST 1940

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WILDLIFE — THEN AND NOW
(*A historical contest feature*)

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FOX HUNTING NOTES
By W. Newbold Ely, M.F.H.

UNION LABEL 6

ANALYZING THE SEASONS

THE deer herd and how to manage it properly has for a number of years been a serious problem both for the Game Commission and the sportsmen. Never, however, was that problem more serious than it is today. Antlerless deer seasons, especially when applied to limited areas only, have of themselves not solved the problem. Deer have continued to increase year after year to the detriment of the soil, the forests, the streams, the hunter, the farmer, and even their own food supplies, as well as to the essential food and cover requirements of other forest wildlife. Among the latter, ruffed grouse, varying hares, cottontail rabbits, and wild turkeys have been the worse sufferers.

Thousands of deer starved to death last winter. More and more hunters have been complaining of inferior trophies, and more farmers protested this Spring and Summer about damage to their fruit trees and crops than usual. More accidents were caused on the highways by deer jumping in front of automobiles than ever before.

As a result of all these conditions, the Commission, after a lengthy consultation with the Directors of the Pennsylvania Federation of Sportsmen's Clubs and others, and after taking into consideration the reports from its own field and office staffs and the widespread demands of the sportsmen who live in the big deer country, found it desirable to establish a general statewide deer season for 1940. Consequently at its meeting on July 11, it declared a season of two weeks, December 2 to 14 inclusive, for both males and females, one to a person, six to a hunting party.

In order to safeguard human life, spike bucks may not be killed. This safety provision will compel a hunter to look carefully to make certain that the deer at which he fires either has no visible horns, or that it has an antler or antlers with two or more points. The 1940 season will be exactly the same as in 1931, except that this year no minimum weight limit was imposed.

Whether or not this endeavor to reduce the animals to a point commensurate with the available supply of forage, to improve the health and virility of the herd, to relieve the deplorable conditions for small game over large overbrowsed areas, and to alleviate the widespread complaints of damage from farmers will be successful depends upon the sportsmen themselves. However, until the animals are so reduced, no sound rehabilitation of the forests can be accomplished, and the Commission's food and cover improvement program is frustrated in large portions of the State. Many farmers in the northern counties, dependent wholly upon their crops for a livelihood, have exhausted their patience or abandoned their properties because they are no longer able to cope with the situation.

The deer herd has definitely become an economic liability rather than an economic asset in Pennsylvania today. Unless it is sufficiently reduced and subsequently carefully controlled, it will be even more so in the future.

The Commission has tried every possible means to remedy the situation during the last five or ten years. The handicaps have been terrific, but it has done the best it could under the circumstances. Today the burden of the responsibility lies with the sportsmen. The Commission is confident they will make a special effort to thin out the animals in areas where they are obviously too abundant, and that elsewhere they will kill sparingly.

Setting aside a full month for hunting small game has apparently met with universal favor among the sportsmen.

The Commission felt, and always has felt, that simplicity in setting up the seasons and bag limits is conducive to the best all around conditions. In the past the problem of setting up seasons to meet local conditions, by the very nature of such restrictions, caused much confusion. In fact even slight changes from time to time have not only confused thousands and thousands of sportsmen, but have gotten many of them into difficulties which would most certainly have been avoided had the seasons been uniform and the regulations simply defined.

The fact that small game of all kinds is increasing and conditions for it are improving enough, except in heavily overbrowsed deer sections, to warrant a full month's season merits some serious thought. Such conditions are not brought about over night; they are the result of days, weeks, months, and years of careful planning, not only by the Commission but by hundreds of sportsmen's associations and individuals.

Except in the "deer country", food and cover conditions are perhaps more favorable today than they have been for many years; and while the Commission has been stressing these two important activities on its game lands, hundreds of sportsmen's associations have likewise sponsored food and cover development programs locally. Now that these programs have gotten such a splendid start, and that we know positively that game has increased locally as a result of them, every effort must be made further to promote these activities which have contributed so much to an increased game supply.

And let no one get the impression that a full month's season implies that game is over abundant, and consequently kill off too closely, thereby endangering the seed stock. See page 10 for complete summary of the 1940 seasons and bag limits.

PIONEER WILDLIFE PROTECTOR

DR. JOSEPH KALBFUS
1852 — 1919

FRONTIERSMAN : NATURE LOVER : PUBLIC SERVANT
LAWYER : DENTIST

HE LED IN THE EARLY MOVEMENT TO ESTABLISH A PUBLIC AGENCY TO CONSERVE AND RESTORE PENNSYLVANIA'S WILDLIFE RESOURCES FOR THE ENJOYMENT OF THE CITIZENS OF THE COMMONWEALTH. THROUGH HIS RESOURCEFULNESS, UNDAUNTED COURAGE, AND TIRELESS ENERGY AS SECRETARY AND CHIEF PROTECTOR OF THE PENNSYLVANIA GAME COMMISSION FROM JULY 1898 TO AUGUST 1919, HE OVERCAME ALMOST INSURMOUNTABLE OBSTACLES, AROUSED PUBLIC OPINION AND HELPED TO BLAZE THE TRAIL FOR A LASTING WILDLIFE RESTORATION POLICY. KILLED AUGUST 10, 1919, WHILE IN PERFORMANCE OF HIS DUTY, AT A RAILROAD CROSSING IN WARREN COUNTY. IN THE WORDS OF HIS FAVORITE POEM HE WAS TRULY

" ONE WHO LOVED HIS FELLOW MEN "

ERECTED 1940 BY THE SPORTSMEN OF PENNSYLVANIA

The Dr. Joseph Kalbfus Memorial

WITH the unveiling of a beautiful bronze plaque in the State Capitol on July 10, 1940, the perpetuation of the memory of Dr. Joseph Kalbfus, the first full-time Secretary and Chief Game Protector of the Pennsylvania Game Commission was assured. A pioneer in wildlife conservation, he had an unshakable faith in the possibility of restoring the Commonwealth's wildlife resources through protective measures for the benefit of posterity. His good judgment and guiding hand helped to lay the foundation of our present renowned conservation program.

Dr. Kalbfus might well be considered the "Father of Wildlife Conservation" in Pennsylvania, similarly as his friend Dr. Joseph T. Rothrock is so well known as the Father of Forest Conservation in this State. The plaque to his memory faces one for Dr. Rothrock placed in the South Corridor of the Capitol some years ago, and there is something infinitely touching in the thought that the testimonials of these two famous pioneers in conservation will face each other throughout the ages.

Time passes on, but the strength of character, the great personality, the kind and friendly spirit, the indomitable courage of the man will, as they have throughout the years, continue to exert their powerful influence upon all who are interested in conserving and managing our wildlife resources.

The ceremonies incident to the unveiling of the memorial plaque, to say nothing of the presence of many friends and officials throughout the Commonwealth, were true manifestations of the love and esteem held for this great man. Would that we could recount here all of the eulogies and intimate references made by the speakers. There were a few, but just a few, faces in that large group of friends and devoted admirers who had the honor of working with Dr. Kalbfus back in the early days. A number of them still are serving the Game Commission, including Executive Director Seth Gordon, who was the Doctor's understudy for six years before his untimely death; Wilbur M. Cramer, In Charge of Training; Charles B. Baum, Special Investigator; and a few others.

Hon. John M. Phillips, another grand old man of conservation, who took the initiative and helped to get the Game Commission established in 1895, and later served for many years as a member and President of the Commission, was Chairman of the Dedicatory Exercises. It is not often that a man eighty years of age is able to preside at an important event such as this. In opening the ceremonies he spoke of the early problems of the Commission, mentioning the trials and tribulations his friend and companion in arms was faced with because of lack of funds and personnel. He told how they travelled over much of the United States studying various systems so they could choose the best for Pennsylvania, and how through the subsequent establishment of wise laws and programs the Commission finally obtained the enviable reputation it now holds of being one of the greatest conservation states in the Union.

He recalled that fateful Sunday in August 1919 when Dr. Kalbfus, Dr. Charles Penrose, then President of the Commission, Woody Kelly, a member of the staff, and himself started out to locate some game refuges. "We were about ten miles below Warren on the main highway. I had been riding with Woody Kelly but got out and rode with Dr. Penrose. Dr. Kalbfus and Woody Kelly came to a railroad track and were killed. We didn't know it and went on, but came back and found them."

The honor of making the presentation address, which is below excerpted in part, was bestowed upon Col. Henry W. Shoemaker, State Archivist, a great friend of Dr. Kalbfus and one who has done much for wildlife througout the state and nation.

"It is an outstanding event in my life here today to present this beautiful and artistic plaque to the Commonwealth of Pennsylvania in behalf of the Federation of Sportsmen, this fine likeness by Frank Vittor, in memory of the co-founder, with Dr. J. T. Rothrock, of the conservation movement in Pennsylvania, Dr. Joseph Kalbfus. It was my privilege and one of the highlights of my life fifteen years ago to present the similar plaque across the corridor in memory of Dr. Rothrock, the Father of Forestry in Pennsylvania, and by a strange whim of fate I am here again seventeen years later to present the plaque of Dr. Kalbfus.

"My knowledge and friendship for Dr. Kalbfus goes back a great many years, back to 1895 in fact. When I was a small boy I happened to be in the office of my great-uncle, the late Judge Charles A. Mayer in Lock Haven, at the time Dr. Kalbfus had unofficially started his game conservation movement, when a bunch of long-haired and long-bearded professional hunters, who reminded me of all the world of Rafael's great painting of the CALABRIAN BANDITS, came in. They claimed Dr. Kalbfus was stopping them from shooting grouse out of season and selling them to the roadhouses. They said Clinton County Roadhouses had built up a fine business in pheasant suppers and Dr. Kalbfus was spoiling it all, and they wanted Judge Mayer to use his influence to send this man out of the county, and Judge Mayer said quietly, 'isn't that the kind of a business that ought to be stopped.' They argued how it was taking away their livelihood from their wives and children and bringing them great hardships and finally Judge Mayer looked at them with his dark friendly eyes and said, 'I've only got one thing against Dr. Kalbfus and that is he didn't come to Clinton County sooner'. That ended the interview. It certainly made me an admirer of Dr. Kalbfus some years before meeting him.

"The other day, on the 4th of July, I went home and saw a great number of robins and tanagers around the mulberry trees. I always loved these trees because Dr. Kalbfus sent them to me as a gift. Nearly every bright day there are robins and tanagers there by the dozens, more than I had seen in years.

"The best proof that Dr. Kalbfus loved his fellow men is after twenty-one years such a splendid and distinguished audience is here today to honor his memory, including so many of his old-time friends. Through his love of fellow men, Dr. Kalbfus' love of nature was boundless; he was a great power for good. He was a friend of the sick. I remember being laid up in a hospital in New York and he made a trip to see me, as if the long trip was nothing to him, and I told him

His Excellency, Governor Arthur H. James, left, greets Mary Louise Frear, Dr. Kalbfus' granddaughter, of State College, Pa., and Admiral Edward C. Kalbfus, the Doctor's son, President of the U. S. Naval War College, Newport, R. I., just before the ceremonies begin.

Governor James, in a stirring address, accepted the Plaque in behalf of the Commonwealth.

the story of how the market hunters had tried to drive him from Clinton County years before.

"It is extremely fitting and really a marvelous event that we can present this plaque to the Commonwealth, which at the present time is headed by a great conservationist and a great lover of the outdoors, a true sportsman and real American patriot, Arthur H. James."

It was only fitting that a relative of Dr. Kalbfus should unveil the memorial erected to his memory. To Mary Louise Frear, his granddaughter, of State College, fell this honor.

Hon. Ross L. Leffler, President of the Game Commission, introduced Governor James as "an ardent sportsman, a man to whom we all look up to, a man who loves to hunt and fish. We hope he will accept this plaque with the same feeling with which the sportsmen have given it."

Governor James accepted the memorial on behalf of the Commonwealth and paid high tribute to the old pioneer as well as the Pennsylvania sportsmen of today.

In his talk the Governor said:

"The presence of so many men and women from all sections of the Commonwealth, and all walks of life, here this morning is very striking evidence of the interest that the people of Pennsylvania are taking in her conservation problems. It was not my good fortune to have been personally acquainted with Dr. Kalbfus, and much of what he has done for the State is a mere matter of history and a mere matter of what we read; but when men like Mr. Phillips, the old hound that certainly has had a clean tooth all the way through all the days of his life, can certify to the outstanding part that Dr. Kalbfus played in the early and pioneering days of conservation of Pennsylvania game life and its conservation problems, there is none can change what he said.

"For instance, I go around the various sections of our country and when I meet those who are sportsmen they talk to me with more or less envy of the part Pennsylvania has taken in the sportsmen's world. Ordinarily everyone thinks of Pennsylvania as an industrial state, and that all we have is mines, mills, and factories, and that everybody has to go to work and are not interested in the things that give joy to life. They begin to tell of the number of deer killed, and the number of pheasants, and the amounts of everything, and they look with envy upon this great industrial state and refer to it as one of the great conservation states.

"It is entirely fitting and proper that we do honor to the pioneers who have set the pace, men who in a measure have cut the pattern; and it is especially fitting when a man who has given as much to Pennsylvania, in a day when it was rather unpopular, very unpopular, that a man be denied the right to fish as he pleased and to hunt as he pleased, to do what he would in the spirit of a free country, tried to do the greatest good for the greatest number, not with the selfish idea of what he could get. And it is with that spirit that Dr. Kalbfus contributed his services to the cause.

"Another angle particularly appealing to me this morning is that, after a score of years have gone by, we can bend the knee and bow the head in admiration for somebody who traveled along life's journey and made a contribution to his day and generation. I think we ought to do more of it. We speak about Washington and Lincoln whenever we extoll the great things of our country, and every sportsman, as he goes through this hall, can't help but walk a little more erect, feel like saying of both great men, 'They are the type of men I would like to follow.' When the little things knock us down and we look up to such men the inspiration we gain lifts us a little bit higher, makes us better men and better citizens so that we in turn can make contributions to our day and generation. With grateful acknowledgement to those responsible, on behalf of an appreciative family, and on behalf of a grateful Commonwealth, I accept the plaque of Dr. Joseph Kalbfus. Thank you."

Following the Governor's address Mr. Phillips introduced Dr. Kalbfus' son, Admiral Edward C. Kalbfus, President of the United States Naval War College, Newport, R. I. In introducing Admiral Kalbfus Mr. Phillips said he knew him as a boy here in Harrisburg. "Once he told me he waded in the Susquehanna River and got a licking for it. Then he went away and became a sailor. Subsequently he was made Captain of a great war vessel, and still later was appointed an Admiral in the Navy. One time while in the Naval Academy he came home on leave and his father said to me, 'What do you think of that boy of mine?' I said, 'What did he do?' 'Why' he said, 'he was on leave and came here, saw my gun hanging up, took it without permission, and went out hunting. He killed a big rabbit. I looked at it and told him it would cost him $10.00, because the rabbit was out of season.'"

In acknowledging the introduction Admiral Kalbfus said that Mr. Phillips did not tell the rest of the story about the rabbit, and that it gave him an opportunity to present another insight into his father's character. "After I had killed the rabbit," commented the Admiral, "my father said 'That will cost you ten dollars. But', he said, 'you are a guest in my house. I have paid the fine myself and collected five dollars as a reward for the informant.'

"It is not for me", the Admiral continued, "to tell this distinguished audience anything more of the great virtues of this great man, and to me he was a great man. From the first time I knew anything he taught me how to shoot and how to fish. He could shoot right handed and left handed. He could catch more fish in the same pool than I could. He taught me that you can't get something for nothing, that you have to work for everything you get. I think that precept might help the whole country today if we would study it a little more.

"I know if Mother were living she would express her appreciation of the gracious act of the sportsmen of Pennsylvania in erecting this plaque in his memory. Fortunately she knew of it before she passed away. I can speak for my sister and myself in appreciation of this, but I know if Father were here he would want to say 'How about John Phillips, Colonel Shoemaker, Joe Barrier, and all those other people who supported me and without whom I could have done nothing?' I know the part these men played should be inscribed on this plaque, and although their names are not visible there, they are there between the lines. What Father did and what they did is a great contribution to the state and the nation which we all honor and support."

Following Admiral Kalbfus' speech of gratitude Mr. Phillips introduced other members of the family, including Canon Edward Frear and Mrs. Frear, of State College, son-in-law and daughter, and Hugo Frear of Bedford, grandson.

Distinguished guests introduced included Frank Vittor, sculptor of the plaque; William N. Ludwig of the State Art Commission; Wm. B. McCaleb, Lanning Harvey, Dr. William H. Moore and John Q. Creveling, former members of the Game Commission; Hons. Samuel C. Castner, William G. Fluke, and Robert Lamberton of the present Game Commission; Judge Grover C. Ladner, former President of the Pennsylvania Federation of Sportsmen's Clubs; John C. Youngman, President of the Pennsylvania Federation of Sportsmen's Clubs; and M. C. Merrits, Vice-President of the Federation and chairman of the committee on arrangements.

The closing prayer was offered by the Rev. Darlington R. Kulp, of Reading, President of the Pennsylvania Division of the Izaak Walton League of America.

For those of our readers who never heard the story of Dr. Kalbfus it might be fitting to mention here just a few highlights of his early life. Although somewhat frail as a boy, he developed into robust manhood, and was always an ardent lover of wild creatures and the great outdoors. Many of the circumstances surrounding his early life were adventurous and thrilling. He spent a number of years on the western plains during the dangerous frontier days, often suffering untold hardships.

Later he read law with his brother Daniel Kalbfus, and was admitted to the Carbon County Bar, where he participated in numerous notable criminal cases. He was a federal revenue officer in the anthracite coal region during the reign of the Molly Maguires—a most hazardous duty. He then served with distinction as a clerk in the offices of the Secretary of the Commonwealth. Later he completed a course in dentistry at the Philadelphia Dental College and successfully followed that profession in Harrisburg until he became Chief Game Protector of Pennsylvania in 1898, the duties of which office he discharged faithfully for the first six years without remuneration.

In his career of 21 years of distinctive service as Secretary of the Pennsylvania Game Commission the influence of his dynamic personality and magnetic leadership was felt throughout the entire country. He became a nationally recognized leader in game administration long before his untimely death on August 10, 1919, in a railroad crossing accident in Warren County, while on an official trip.

Col. Henry W. Shoemaker, State Archivist, and well known conservationist, making the presentation address.

It is also fitting that the sportsmen of Pennsylvania be commended for making possible this fine memorial. It was they who endorsed the memorial fund when the Pennsylvania Federation of Sportsmen's Clubs early in 1937 assumed the responsibility for sponsoring the plan. The Federation selected a special committee headed by Hon. John M. Phillips as General Chairman, and the late Judd B. Turner, former Assistant Director of the Commission, as Secretary-Treasurer. The following well known sportsmen were members of the Committee: W. E. Hughes, Oil City; F. M. Geer, Warren; Colin Reed, Washington; R. S. Cooper, Connellsville; A. J. Hanes, St. Marys; J. H. Barkley, Punxsutawney; M. C. Merritts, Altoona; Joseph Shreve, Johnstown; W. H. Kreitz, Lancaster; Raymond Kinsey, York; John C. Yongman, Williamsport; F. F. Marshall, Ridgway; H. S. Smith, Wilkes-Barre; N. C. Farnham, Honesdale; C. A. Rowe, Doylestown E. D. Haehnle, Bethlehem; Darlington

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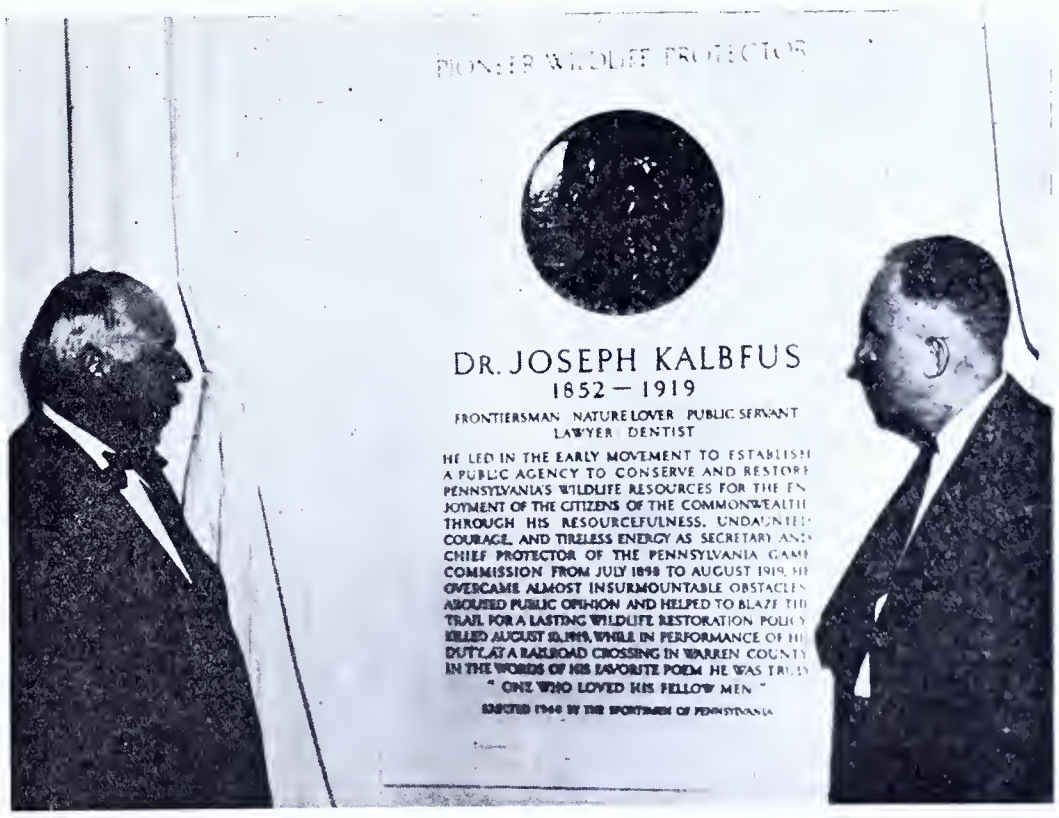

Admiral Kalbfus and Ross L. Leffler, President of the Game Commission looking over the Plaque after its unveiling.

Soil Conservation Districts

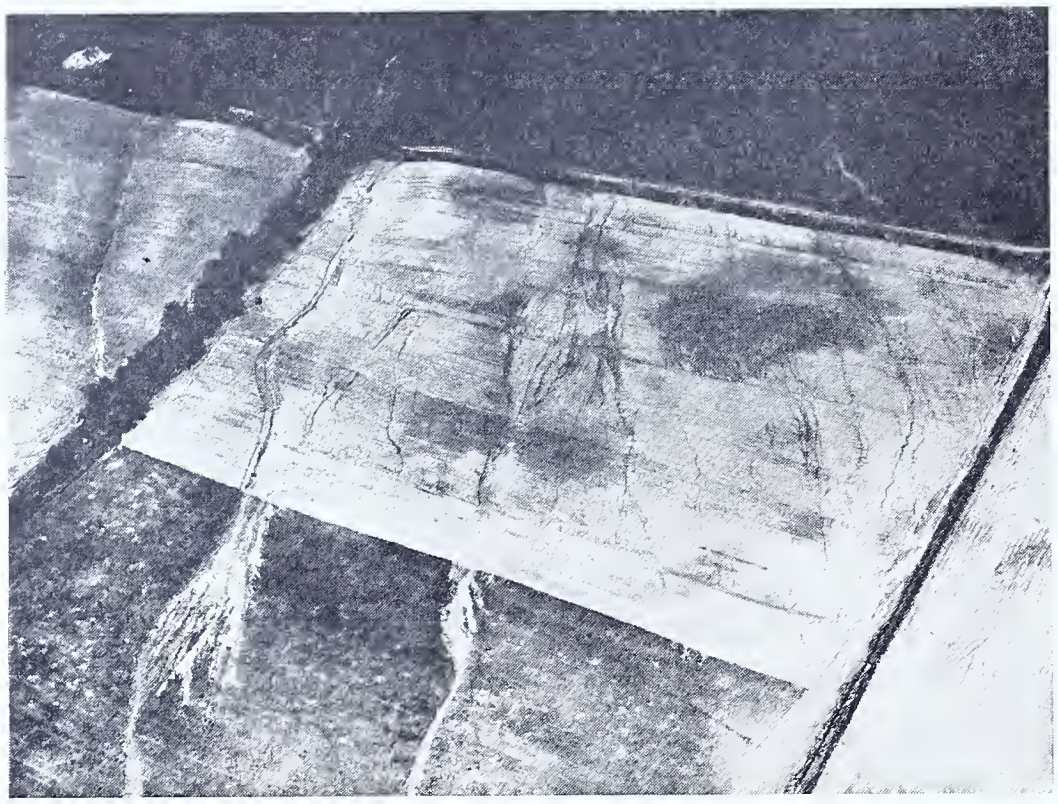

Fig. 1—Destructive Land use—Forms arranged in block fields without regard to the lay of the land often lead to serious soil losses. These, in turn, result in poor crops and loss of wildlife habitat.

IT is estimated that at the present time over 80%—four-fifths—of all the game shot annually by hunters in the United States comes from privately owned farms. It naturally follows that a large part of the hunting itself is done on these farm lands. For many of the more popular game species, private farms furnish practically all of the suitable habitat. It is clear then that the future of free public hunting depends largely upon the owners of our farm lands.

Emphasizing the dominant part that farm lands play in our modern system of hunting does not detract one bit from the vital part that forests and other non-farm land, both publicly and privately owned, play in furnishing hunting for deer, bear, waterfowl, and other game native to these habitats. A public land policy with regard to these lands is essential to a sound game management program. However, many of our greatest problems in assuring hunting opportunities are arising in connection with farm game and on farm lands. To get a proper understanding of this problem, let us examine a few historical facts.

The period following the World War was a time of rapid transition in regard to hunting problems. So we should begin by noting the conditions prior to that time that were later to make so marked a change. Hunting pressure is probably the most notable. The number of hunters has multiplied five times, and this has taken place since 1920. Whereas we now have around 7,000,000 hunters in the United States, we formerly had between one and two million.

Whereas before the war, the hunters pursued waterfowl, grouse, and deer on wilderness and water areas, and quail and rabbits on farm land, great emphasis now is placed on the pheasant, Hungarian partridge, and other exotics—entirely new to our countryside. Most of these introduced species are found almost exclusively on farms.

Formerly the means of travel from home to hunting grounds was by horse and buggy, or railroad for some, or by shanks-mare for most. Today it is almost universally by automobile.

The increased public interest in hunting as a mode of recreation, the ease of transportation in the automobile, and the entrance of the ringneck and others as much-desired trophies resulted in the greatly magnified hunting pressure, mainly exerted on the farm lands. Thus today we have millions of our citizens, a large part of them urban dwellers, swarming over the countryside during the open hunting seasons, creating a sociological problem in landowner-sportsman relationships that did not even exist before the 1920's.

These changes have resulted in vast restrictions of the opportunity for free public hunting through increased posting of land against trespass. They have also resulted in a strained attitude toward hunting and even toward wildlife management on the part of many landowners, owing to the recurring nuisances committed unwittingly by a few hunters. For their part, thinking sportsmen have attempted to work out some equitable solution to the problem through various forms of farmer-sportsmen-state cooperatives. In the past decade, there have been hundreds of these projects, beginning with the famed Williamston project in Michigan.

The details of their plans undoubtedly cover almost every conceivably workable combination of benefits that has been brought forth for the solution of the problem. Yet, I think it may be said that, with few exceptions, these plans have not succeeded very well. A large number of them survive, at least on paper, but by and large they have

Fig. 2—Conservation Pattern of Land Use—The fields are laid out to fit the curvature of the land. Each field is used according to its physical adaptability, whether it be crop field, pasture, woods, or swampland.

* Presented at the Fifth North American Wildlife Conference, Washington, D. C., March 19, 1940.

By F. C. Edminster*

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so far gained little recognition as a sound and widely applicable answer to the problem. Certainly they are not receiving the widespread application that is so urgently needed.

Why have these past attempts failed to accomplish the set objectives? I think that a dispassionate analysis of the failures, partial failures, and successes of the past will disclose at least some of the reasons. Most of these cooperatives are operated by the states. This is as it should be, but of necessity the states have in most cases been forced to shoulder too much of the burden. The state has sponsored the project, lined up the cooperators, furnished the required materials, and usually supplied such services as posting, fencing, and patrolling. For the most part, the organized sportsmen have done little but pay through their hunting licenses. For the most part, the farmers have done little but acquiesce in the hope that conditions will be improved.

This system as it has generally operated in the past has been too costly. In some states it costs around fifty cents per acre to set up the cooperatives and thirty cents or more per acre annually to maintain—and these are mainly administrative costs—with hardly a nickel going to the landowner or into the land itself to make better hunting. The result is that the money runs out and only a few thousand acres are encompassed. A successful cooperative requires that both the farmers and the sportsmen must derive enough from it to stimulate them to put much into it.

One project that has apparently succeeded very well is the Plain Church Cooperative in Ohio. In the first place, the area involved here is highly productive of pheasants, an excellent condition to assure sportsman interest, and one not prevailing generally. Secondly, the farmer derives income from hunting privileges. Another equally important factor is that the cooperative was farmer-initiated and attached to an existing and functioning farm organization, in this case a church group.

This may seem inconsequential at first thought, but it may be a fundamental necessity to a successful cooperative. Without an active, aggressive farmer organization to tie in with, a game management cooperative is badly handicapped from the start. There are many other factors involved in this problem, but I think we have covered those that point to the two fundamental principles: (1) The cooperative must tie in with a functioning farmer organization, and (2) it must function at a low cost per acre for administrative expenses. I would add a third point which in reality only modifies the first: The farmer organization must be actively interested in the conservation of the farm resources in order to engage successfully in the management of wildlife. I think this point is most important.

From this point—with sound farmer participation—a cooperative can build rapidly. It should be apparent that the sportsmen, as well as the farmers, must be well organized if they are to be in a position to cooperate adequately. There must result a tangible and valuable return from the cooperative to both sportsmen and farmers. The sportsman, of course, wants a place to hunt and some game to pursue. What the farmer wants will vary, but whether it be mere protection of property or more material returns, the cooperative arrangements must supply it. I am not concerned now with the details of the plan. It will be easy enough for the farmers, cooperating with public agencies, to establish refuges, plant food patches, protect woodlands from grazing, arrange lease fees, or whatever is needed, once we get the required organization functioning.

I believe that there is now a workable answer to this problem. But first, let me again restate the basic requirements: A medium of organization for both farmers and sportsmen, with a firm interest in conservation as a whole, through which the two groups and the state and other interested agencies can cooperate in carrying out a

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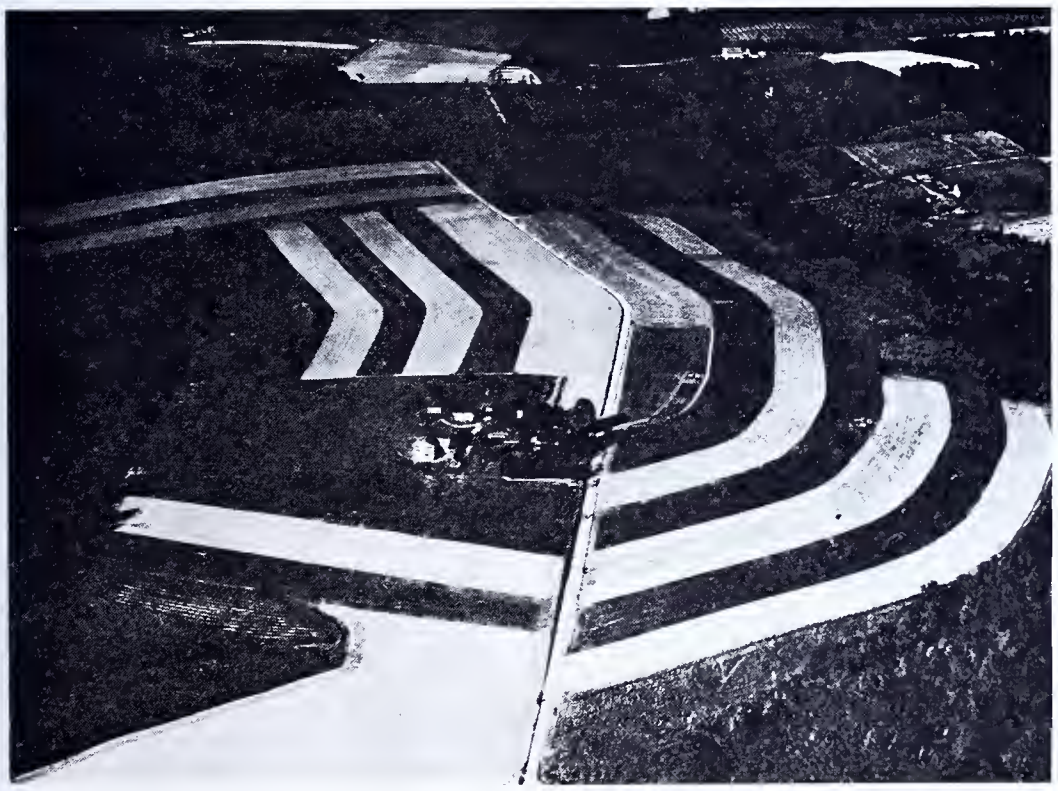
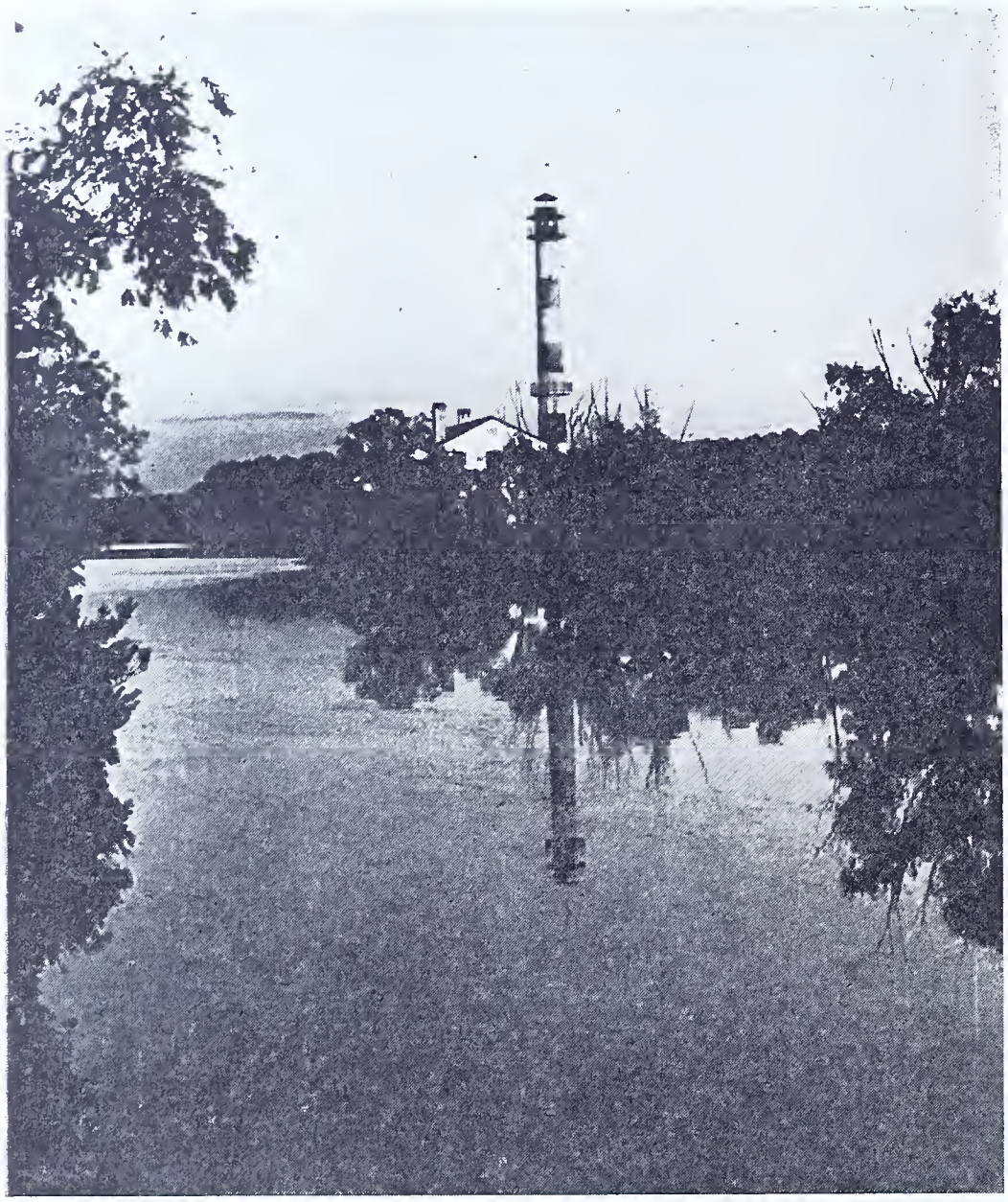
Figs. 3 and 4—A Pennsylvania Farm Before (Figure 3) and After (Figure 4) a Conservation plan has been effected. The most apparent change is from block fields of crops to contour strip-cropping. Effects of erosion can be seen in the "Before" view even from an aeroplane. The change in cropfield layout not only controls erosion but also markedly increases the summer bird population.



Note also the large gully area at lower left which has been revegetated with trees and shrubs and protected with a diversion terrace. Woody plantations may also be noted at lower right center. (The diagonal lines on the sides of Figure 3 indicate the scope of area included in Figure 4).

OVER A CENTURY OF



Refuge headquarters and lodge where accommodations are provided visitors by concessionaire at Lake Mattamuskeet Wildlife Refuge, N. C., as seen from bridge across Main Canal, November 2, 1939. This building was provided by CCC remodeling of pump station once used in attempt to drain the area for agriculture. A spiral staircase leads through the old chimney to the observation platforms. (Photo by Howard Zahniser).

CONSOLIDATION recently of the Bureau of Biological Survey and the Bureau of Fisheries to form the new Fish and Wildlife Service under Secretary of the Interior Harold L. Ickes, will recall the rise of the Biological Survey from a small section of economic ornithology established in the Department of Agriculture 55 years ago to its present status as a Bureau with a world-wide reputation of leadership in wildlife conservation.

Since the handful of ornithologists under C. Hart Merriam, first Bureau Chief, organized their work in 1885 to study migration and distribution and the economic relations of birds to agriculture, the functions of the Biological Survey have expanded to include all phases of wildlife conservation and all forms of vertebrate wildlife except fishes and marine mammals.

Under a succession of six chiefs, the Biological Survey probably has done more outstanding work in the field of wildlife conservation than any other single organization in the world. Its list of past and present personnel reads like a who's who in biological science.

Wildlife Paradise Depleted

Historians agree that when the early colonists settled in the new world they literally found themselves in a wildlife paradise. Game of all types abounded. Buffaloes were numbered in the millions; antelopes were said to be even more numerous; wild turkeys were plentiful in woods and fields; passenger pigeons were so numerous they darkened the skies. There were few species that could not boast of tremendous populations. Fur-bearing animals alone were responsible for many great American fortunes.

But the inroads of civilization, wanton slaughter of birds and mammals by the hundreds and thousands, disease, lack of understanding management, greed for large bags and long seasons, all these combined to reduce the nation's wildlife to a pitifully small number of its once fluorishing population. Scarcely more than scattered remnants of what had once been the richest resource of its kind on earth were to be found anywhere in the continental United States by 1930.

Several valuable species had vanished entirely by 1930—the heath hen, the passenger pigeon, the Carolina parakeet, to mention a few. The migratory waterfowl which as recently as 1890 existed in incredible abundance were, by 1930, so diminished as to be in great danger of extermination. Big-game animals, all forms of small game, furred and feathered, were in no better case. It is more apparent now than it was in the early days that the wildlife resources of America could not long have escaped irreparable damage or destruction if the conditions were not corrected.

Wildlife in Good Condition, Prospects Hopeful

During its 55 years of service in the preservation of the nation's wildlife the Biological Survey has made important studies on all forms of wild animals and recommended practices to insure their protection. Conditions have improved considerably since the turn of the century. In the last 5 years, the results have become apparent. Many forms are completely out of danger; others are well on their way to safety; still others require continued study and protection to insure their preservation.

In all, however, there is a more hopeful outlook for the wildlife resources of the continent than ever before in the present century.

A review of the accomplishments of the Biological Survey's workers would fill volumes. Food habits investigators, migration and distribution experts, refuge managers, taxonomists, predatory-animal and rodent control workers, law-enforcement agents, all have contributed materially to the detailed knowledge on the life histories, habits, distribution, and status of the various forms of wildlife, knowledge acquired in the effort to preserve a great natural resource.

Biologists Find and Describe Many Mammals

Survey scientists collected more than 136,600 specimens of mammals in North America during their years of research. The largest collection of its kind in the world, it includes the smallest mammal on the continent, a three-inch shrew, and a Kodiak bear, the largest existing meat eater. The collection is indispensable in connection with the administration of wildlife along the many lines embraced in the general activities of the Survey.

While some workers collected mammals in Death Valley, the mountains of Mexico, or the frozen lands of the Arctic, other Survey workers spent years in other fields and in the laboratory observing wild animals as they fed and examining the food contents of the stomachs of various mammals and birds. Information obtained by food habits investigators is invaluable to Federal, State, and private organizations interested in planting foods to attract or maintain various species of animals.

WILDLIFE HISTORY

On the basis of 40 years research, a recent Biological Survey publication describes the "Food of Game Ducks" and another, "Food Habits of Diving Ducks."

In 1920, the Biological Survey began birdbanding activities, work that formerly was done by the American Birdbanding Association. Since then, more than 3,000,000 birds in North America have been tagged with numbered bands. Records of date and place of banding and the date and place the birds are recaptured have given the Survey information that shows what routes are taken by various species of birds during migration.

This phase of the Survey's work is described in a mimeographed leaflet, BS-145, entitled "Birdbanding."

With the knowledge supplied by migration investigators plus information obtained by other scientists, the Survey was able to determine where it might best locate the more than 260 areas in the nation-wide system of wildlife refuges.

With the cooperation of more than 750 active birdbanders, and the aid of other Federal, State, and private agencies and individuals, Survey personnel have devised methods of conducting migratory waterfowl inventories that indicate the trends in population from year to year.

These annual inventories indicate that the program of the Biological Survey is succeeding. In 1900, observers believed there were about 120,000,000 migratory waterfowl in North America. By 1935, the population had decreased to less than 30,000,000. The Biological Survey recommended drastic hunting regulations and intensified its action program in that same year, basing its program on the data compiled during the previous 50 years. Today, the population is about double that of 1935, being estimated in 1940 to be in the neighborhood of 65,000,000.

Putting Information to Work

In 1903, President Theodore Roosevelt established the Pelican Island Bird Refuge in Florida, the first wildlife sanctuary in the country. The Biological Survey soon began to administer a series of sanctuaries and refuges that developed into what is now a nation-wide system of wintering, resting, and nesting areas for all types of animals.

In 1934, the refuge system began suddenly to expand more rapidly than ever before. There were 104 wildlife areas in 1934. As of December 31, 1939, there were 266 national wildlife refuges with more than 13,500,000 acres of land.

Selected on the basis of need and suitability to wildlife and on areas where wildlife is the major consideration, the refuge system today includes 178 refuges primarily for waterfowl, 50 chiefly for colonial birds, 26 for wildlife in general, and 12 for big game.

Control Necessary for Preservation

Paradoxically, the preservation of wildlife sometimes requires the reduction of some forms. Predatory animals and rodents sometimes endanger some species or become so numerous in certain areas that livestock or farmers' crops are damaged by the depredating animals. Then, it is necessary to adopt corrective measures—either removing the animals to other areas or destroying them. This need for control of animals resulted in an appropriation by Congress in 1915 delegating to the Biological Survey the task of controlling predatory animals and rodents.

With the cooperation of various Federal and State agencies, private firms, and individuals, Biological Survey workers have devised scientific methods to control injurious species without harming other forms, and these methods are so applied that even the injurious species is extirpated only locally.

During the past decade the Biological Survey and cooperating agencies have done much to reduce losses from predators and rodents and to protect public health. Since the Survey's participation in control operations, more than 1,174,000 predators have been taken; 5,128 stock killing bears; 1,031,951 coyotes; 21,410 wolves; 4,953 mountain lions; and 110,642 bobcats.

Among the important phases of the control work are the destruction of house rats, the prevention of spread of typhus fever, sylvatic plague, and other public health menaces in which rodents are involved.

Study Fur Animals

For many years, the Biological Survey has also concerned itself with the status of the continent's fur-animal resources. Regulation of trapping and hunting of fur animals, however, rests with the States. Fur experts of the Survey declare that unless more stringent control is exercised in the taking of fur animals, this valuable resource will become so depleted that many of the animals may even be exterminated.

Exactly how many fur animals are trapped and pelted each year is not known. Recent nation-wide investigations by Biological Survey workers revealed that few States have adequate information as to the number of fur animals within their jurisdiction and the number being taken each year.

"Though accurate figures are not available, and we do not know whether we are producing 10,000,000 fur animals a year and taking 15,000,000 or producing 15,000,000 and taking 25,000,000, one thing is certain," fur investigators declared, 'and that is that we are taking many more fur animals than are being raised each year. We are rapidly depleting one of the most valuable sources of income in the country."

Investigate Diseases

When fur farmers and breeders in the United States were losing many animals because of disease a few years ago, the Biological Survey appointed special disease investigators to study the situation and devise methods of prevention or control.

In the past 5 years, the wildlife disease investigators, among other things, have worked on the control of distemper in foxes, the prevention of coccidiosis in rabbits, and have curbed the spread of lung disease in silver foxes. The work has since expanded to include research into all fields of wildlife diseases. In recent years these workers have made valuable contributions to knowledge in preventing the ravages of the dread waterfowl disease, botulism.

66 Agents Enforce Game Laws

The Migratory Bird Treaty Act, passed by Congress following the signing in 1916 of a treaty between the United States and Great Britain for the protection of North American migratory birds, is the basis on which the regulations of migratory bird hunting are established and enforced. Mexico signed a similar treaty with the United States in 1936. The Migratory Bird Conservation Act, passed in 1939, authorized the purchase of areas for waterfowl refuges. Without this legislation, it is doubtful that the waterfowl resources of the continent could have been preserved.

Under the Migratory Bird Conservation Act, the Migratory Bird Hunting Stamp Act, and the Lacey Act, law-enforcement agents

(Continued on Page 30)

Pelicans. Clear Lake, California. Photo by Dr. Ira N. Gabrielson, Director, Fish and Wildlife Service, U. S. Dept. of the Interior.

RESOLUTIONS OF 1940-41 HUNT-

Declaration of 1940-41 Hunting and Trapping Seasons

The Commission made due investigation and carefully analyzed extensive field reports covering the present and prospective supply of game and fur-bearing animals. It discussed at some length with members of the Staff, the Directors of the Pennsylvania Federation of Sportsmen's Clubs and others, rules and regulations which might properly be adopted in order to maintain an adequate supply of the several species for the future. The Commission also considered continuance of steps to reduce the number of hunting accidents and further to improve relations between landowners and sportsmen.

After full discussion, upon motions made, seconded and unanimously carried this 11th day of July, 1940, findings of fact were agreed to and resolutions fixing rules and regulations covering seasons and bag limits were adopted as follows:

Findings of Fact

The Pennsylvania Game Commission finds as facts that:

(A) Small Game—All species of small upland game, except varying hares, have shown sufficient increase to justify an open hunting season of a full month, and in the main to allow maximum bag limits as set forth in the Game Law, while some species have increased sufficiently to justify the establishment of more liberal bag limits than those stated in the law.

(B) Big Game

1. *Deer*—The deer herd has increased materially during the past two breeding seasons, while deer food conditions in many sections of the Commonwealth are no longer adequate to sustain the current herd in a sound and thrifty condition. The presence of excessive numbers of deer is interfering seriously with the Commission's food and cover improvement program, from 75% to 90% of the trees, shrubs and food plots recently planted by the Commission in deer territory having been destroyed by said animals. In certain large areas reports from field officers convince the Commission that, due to the size of the deer herd, small forest game, such as grouse, varying hares, cottontail rabbits, and in some counties wild turkeys, are not thriving primarily because the under-growth, including many essential food species, has been destroyed. Furthermore, deer damage complaints from farmers in many counties this spring are widespread and most distressing.

   The Commission is convinced that (1) to bring the deer herd within the presently available forage supply, (2) to improve and maintain the health and virility of the animals, (3) to improve food and cover conditions for small game within vast, over-browsed areas, (4) to alleviate widespread deer damage complaints on Pennsylvania's farms, and (5) to prevent overcrowding of hunters with the attendant danger to human life which occurs when only limited areas are opened to the hunting of deer without visible antlers or when only a short season is declared, it is both necessary and desirable to have a statewide combined open season of two weeks for deer of both sexes, other than those animals having only a visible spike antler or antlers without branches, commonly called points, which animals should be protected to safeguard human life. The Commission is further convinced that such a season will not jeopardize the future of the herd and will give all deer hunters an opportunity to enjoy the sport without the overcrowding of hunters in any part of the Commonwealth.

2. *Bears*—The present supply of bears does not seem to warrant an open season of more than four days, but it is felt that organized hunting parties can safely be allowed to take two bears.

(C) Fur-Bearers—The prospective supply of various fur-bearing animals, except in the case of the muskrat, is ample to allow the taking of such animals in accordance with the provisions of the law.

The supply of minks is sufficiently abundant to justify two additional weeks of trapping, while under present conditions the season for trapping muskrats should not exceed one month.

Otters and beavers have again increased sufficiently to permit the taking of these fur-bearers in a number of counties as below indicated.

RESOLUTIONS

1. WHEREAS, After due investiagtion and information otherwise obtained by the Pennsylvania Game Commission of the Commonwealth of Pennsylvania as to the annual supply of game and fur-bearing animals in the Commonwealth, said Commission finds as facts and is of the opinion that to assure the maintenance of an adequate future supply of game birds, game animals and fur-bearing animals in said Commonwealth, it is necessary to reduce the length of certain open seasons or to reduce certain bag limits for game birds, game animals and fur-bearing animals fixed by law, and to establish small game possession limits and other regulations, governing the hunting, taking, and killing thereof, during the period from October 1, 1940 to September 30, 1941, inclusive, as hereafter set forth; and that protection may be removed and an open season declared, and extensions of certain open seasons and bag limits, as provided by law, may be allowed for certain other species of game and of fur-bearing animals hereinafter named, without jeopardizing the future supply thereof as hereinafter set forth, notwithstanding the open seasons and bag limits stated in the Act of Assembly of this Commonwealth; all under the powers and authority vested in the Pennsylvania Game Commission, in accordance with the provisions of Articles V and VI of the Act of Assembly, approved June 3, 1937, P. L. 1225, entitled "An Act concerning game and other wild birds and wild animals; and amending, revising, consolidating and changing the laws relating thereto", as amended by the Act approved June 24, 1939, P. L. 810;

2. THEREFORE, BE IT RESOLVED, That in accordance with said facts, the Pennsylvania Game Commission of the Commonwealth of Pennsylvania, pursuant to the powers and authority conferred upon it by the aforesaid Act of Assembly, does hereby: (a) fix open seasons, certain shooting and trapping hours, and daily, season, and possession limits, for hunting, taking, killing or trapping for certain species of game birds, game animals, and fur-bearing animals, (b) increase open seasons and bag limits for certain species thereof and reduce open seasons and bag limits for certain other species thereof throughout the Commonwealth and in certain parts thereof, and (c) prescribe the method of hunting and trapping therefore from October 1st, 1940 to September 30th, 1941, inclusive, as hereinafter specified (Sundays excepted where so provided by law); and during said year, insofar as open hunting or trapping seasons, bag limits, certain shooting and trapping hours, and certain possession limits are concerned, it shall be lawful to hunt for, take and kill game birds, game animals, and fur-bearing animals only in accordance with the open seasons, shooting hours, and daily, season and possession limits, as fixed and specified under the rules and regulations established in these resolutions; and it shall be unlawful for any person or persons to hunt for, take, kill or possess any game birds, or game animals, or fur-bearing animals in violation of the provisions of these resolutions or any of them:

UPLAND GAME (Small game possession limit three days' bag)*	BAG LIMITS Day	BAG LIMITS Season	SEASONS Open	SEASONS Close
Woodchucks (Groundhogs)	4*	Unlimited	July 1	Sept. 30
Ruffed Grouse	2*	10*		
Quail, Bobwhite	5*	15*		
Hungarian Partridges* (3 counties only)	2*	6*		
Wild Turkey (8 counties closed)	1	1		
Ringneck Pheasants, males only	2	12*	Nov. 1	Nov. 30
Grackles (commonly called Blackbirds)		Unlimited		
Rabbits, Cottontails	4*	20		
Squirrels, Gray, Black and Fox (combined kinds)	6	20		
Squirrels, Red		Unlimited	Nov. 1	Sept. 30, '41
Raccoons, all counties by individual or hunting party	1*	15*	Nov. 1*	Dec. 31
Raccoons, by traps (21 counties closed)		15*		
Bear, over one year old by individual (10 counties closed)	1	1	Nov. 18*	Nov. 21*
Bear, over one year old by hunting party of five or more*	2*	2*		
Deer, a combined season, consisting of both a regular season for male deer with two or more points to one antler as authorized by law, and a season for antlerless deer*, each throughout the Commonwealth, with deer bearing only a visible spike antler or antlers without branches, commonly called points, being protected	1	1	Dec. 2*	Dec. 14*
Deer, as above, by hunting party of 6 or more	6	6		
FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates)				
Minks		Unlimited	Nov. 1*	Jan. 31, '41
Otters* (By traps only, in 6 counties)		4*	Nov. 1*	Jan. 31, '41
Muskrats (By traps only)		Unlimited	Dec. 1	Dec. 31*
Beavers* (Traps only, 27 counties closed)		3*	Mar. 1*	Mar. 15, '41
Opossums and Skunks		Unprotected	until Sept. 30, '41	

Items above without asterisks are as stated in the law and listed only for information; those with asterisks (*) show where changes were made or open seasons and bag limits fixed by the Commission.

ING AND TRAPPING SEASONS

3. AND BE IT FURTHER RESOLVED, That pursuant to authority conferred upon it by Article V of the Act of Assembly approved June 3, 1937, P.L. 1225, as amended by the Act approved June 24, 1939, P.L. 810, the Pennsylvania Game Commission, in addition to fixing the dates for the regular statewide season for male deer with two or more points to one antler, as authorized by law, from December 2 to 14, inclusive, finds as facts and is of the opinion that—

(a) In order to assure the maintenance of an adequate future supply of the species;
(b) To maintain a more nearly balanced sex ratio in the breeding stock, which in its opinion does not now exist, throughout the Commonwealth;
(c) To reduce the herd to a size which will assure sufficient food and forage to sustain the animals in a sound and thrifty condition;
(d) To improve food and cover conditions for small game over vast areas;
(e) To alleviate widespread deer damage complaints on Pennsylvania's farms; and
(f) To prevent overcrowding of hunters with the attendant danger to human life which occurs when only limited areas are declared open to the hunting of deer without visible antlers or when only a short season is declared;

an open season which will allow for the statewide removal of deer is both necessary and desirable.

THEREFORE, The said Commission does hereby remove protection from and does declare an open season for the hunting, taking and killing of antlerless deer throughout the entire Commonwealth, except in Game Refuges and other protected areas established by the Commission, during the same period as the season for male deer with two or more points to one antler, namely, from 7:00 o'clock A. M. on the 2nd day of December, 1940, and continuing to the 14th day of December, 1940, at 5:00 o'clock P.M., during which period all deer, except those with only a visible spike antler or antlers without points (sometimes referred to as branches or a "Y"), may be hunted for and taken only in the manner and in the numbers prescribed by said Act for the taking of male deer, with no special permit being required other than the regular hunter's license wherever the Act cited requires the possession of such license.

FURTHERMORE, The said Commission deems it unnecessary to exercise its powers, under sub-section (c) of Section 501 of Article V of the Act above cited, to issue or require special permits to hunt for or kill antlerless deer during said combination open season hereby fixed for the killing of deer, or to limit the number of persons who may hunt for such deer in any portion of the Commonwealth, or to require a fee of $1.00 for a special permit which, under the said Act of Assembly, it is empowered to impose; and the Commission does hereby declare a close season and it shall be unlawful for any person to hunt for, kill or take, or attempt to hunt for, kill, or take, any deer with only a visible spike antler (sometimes called horn) or antlers, without points (sometimes referred to as branches or a "Y"), regardless of the size or development thereof, during the year 1940; and

4. BE IT FURTHER RESOLVED, That in accordance with the provisions of Article V of the Act above cited, the Commission hereby declares an open season for the hunting, taking, and killing of Hungarian Partridges in the Counties of Lycoming, Montour and Northumberland; and

5. BE IT FURTHER RESOLVED, That in accordance with the provisions of sub-section (b) of Section 501 of Article V of the act above cited, the Commission is of the opinion that raccoons are sufficiently abundant to justify the hunting for, taking, and killing of such animals during the open season and in the numbers above indicated through the use of lawful traps and deadfalls in all counties of the Commonwealth, except Beaver, Berks, Bucks, Butler, Cambria, Carbon, Chester, Dauphin, Delaware, Lancaster, Lawrence, Lebanon, Lehigh, Mercer, Montgomery, Northampton, Northumberland, Philadelphia, Schuylkill, Snyder, and York, (in which excepted counties certain landowners may trap raccoons under the law); and all counties except those named are hereby declared open to such trapping in accordance with the provisions of the Act above cited, the season bag limit of fifteen (15 as indicated to apply to hunting and trapping combined; and

6. BE IT FURTHER RESOLVED, (a) That the open season for trapping beavers as above indicated shall apply to all the counties of the Commonwealth, except Armstrong, Beaver, Bradford, Cambria, Cameron, Carbon, Centre, Clearfield, Columbia, Fayette, Greene, Indiana, Jefferson, Lycoming, McKean, Montour, Northumberland, Potter, Schuylkill, Snyder, Somerset, Sullivan, Tioga, Union, Washington, Westmoreland and Wyoming, but in addition to the regulations as fixed by law there is hereby added a special regulation that one person shall set and tend not to exceed ten (10) traps; (b) that the open season for taking otters as above indicated shall apply only to the counties of Lackawanna, Monroe, Pike, Susquehanna, Wayne and Wyoming; and (c) that beavers and otters shall not be trapped or taken in any other county of the Commonwealth; and

7. BE IT FURTHER RESOLVED, That in accordance with the provisions of Section 603 of Article V of the Act above cited, the Commission hereby declares the Counties of Cameron, Clarion, Clinton, Elk, Forest, McKean, Pike, Potter, Susquehanna, Warren, Wayne and Wyoming open to the use of snares without springpoles for the purpose of taking predators from the 16th day of December, 1940, to the 31st day of March, 1941, inclusive, and such devices shall not be used in any other County of the Commonwealth; and

8. BE IT FURTHER RESOLVED, (a) That there shall be no open season to hunt for or kill Chukar Partridges, Sharp-tailed Grouse, Doves, Varying Hares (Snow-shoe Rabbits), Deer with only a visible spike antler or antlers without points, Elk and Cub Bears; (b) that during the year 1940 wild turkeys shall not be hunted, taken, or killed in the Counties of Cameron, Clarion, Elk, Forest, Jefferson, McKean, Potter and Warren; and (c) that during said years bears shall not be hunted, taken, or killed in the Counties of Adams, Bedford, Blair, Cumberland, Franklin, Fulton, Huntingdon, Juniata, Mifflin and Perry; and

9. BE IT FURTHER RESOLVED, That in the interest of safety to hunters, and further to safeguard the future supply of game and of fur-bearing animals, as authorized by provisions of the Act above cited, in shall be unlawful: (a) to hunt for, take, trap, or kill, or to attempt to hunt for, take, trap, or kill any wild birds or wild animals, migratory or otherwise, before 9:00 A. M. (Eastern Standard Time) on November 1, 1940, the first day of the general open hunting season as fixed by these rules and regulations; (b) or to take fur-bearing animals or raccoons before 7:00 A. M. (Eastern Standard Time) by trapping on the first day of the several trapping seasons above fixed for the taking of fur-bearing animals and raccoons, or to set or stake out traps for fur-bearing animals or raccoons prior to that hour on the dates named; (c) or to have in possession more game birds or game animals defined and classified as "small game" than the number that any one person may lawfully take or kill in any three days; and

10. BE IT FURTHER RESOLVED, That the 1940 open seasons, bag limits, and other rules and regulations governing the hunting, taking, and killing of migratory game birds, as promulgated by the United States under the provisions of the Federal Migratory Bird Treaty Act, shall be effective for the year 1940 in this Commonwealth, as provided by Section 503 of Article V of the Pennsylvania Game Law above cited, except that on November 1, 1940 no such migratory game birds shall be pursued or hunted prior to the hour hereinbefore fixed, nor shall such birds be hunted on Sundays; it being construed by the Commission that, except on November 1, 1940, in tidal marsh areas any earlier hour than 7:00 A. M. or any later shooting hour than 5:00 P. M. that may be permitted by said Federal regulations for rails and gallinules after September 30 is not in contravention of the provisions of the section above cited; it being further construed by the Commission that, except on November 1, 1940, any earlier shooting hour than 7:00 A. M. that may be permitted by said Federal regulations for waterfowl and coots is not in contravention of the provisions of the section above cited; and

11. BE IT FURTHER RESOLVED, That any person violating any of the provisions of the foregoing rules and regulations shall, upon conviction, be sentenced to pay the fine and costs of prosecution as fixed by the Act of Assembly above cited; and

12. BE IT FURTHER RESOLVED, That notice of the foregoing action shall be duly published in accordance with the provisions

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KINGFISHER PLEADS HIS CASE

By HAL. H. HARRISON*

Gentlemen:

My name is Kingfisher. I am one of the most beautiful birds in your state and I pride myself on being a fisherman whose skill many of your best sportsmen have envied. In fact it seems to me that his envy has created a selfishness among many of you that is leading to my destruction. Perhaps I can explain a few things in this letter that will cause you to feel a bit more kindly toward me, and which may make you feel that I am a fellow-sportsman who wants to be your friend and who asks in return only that you do not destroy me.

On Page 6, Article I, Section 101, of your Pennsylvania Game Law you will find me listed along with such birds as the English Sparrow, Starling, Crow, Goshawk, Great Horned Owl and a few others as not worthy of your protection. I wrote directly to the Pennsylvania Game Commission to find out why I was not protected as most other birds are and the answer came back: "The fishermen demanded it."

In other words, the fishermen, the SPORTSMEN, resent the fact that the Great Spirit endowed me and all my brothers with an appetite for fish because they are afraid that we might catch a fish to live that they might have caught for sport. If this is true, then sportsmanship plays no part in my case. I will have to state my plea from the standpoint of hard facts to a jury devoid of sentiment.

My defense is based on the death of 313 of my brothers whose lives were sacrificed in order to prove to man that we are not nearly the destructive birds that you believe we are. I quote from the United States Department of Agriculture, Bureau of Biological Survey, Bulletin on "Birds in Relation to Fishes: "Examination of 313 stomachs of Kingfishers, collected in widely different sections of the country, showed that less than half the fishes taken were of kinds usually eaten by man. Crawfishes formed 16 per cent of the total food, frogs more than 5 per cent, and water beetles about 4 per cent. Because the bird occurs singly or in pairs and is so widely distributed, it is probable that DEPREDATIONS ARE COMPARATIVELY UNIMPORTANT except at fish hatcheries or at planted streams. At these places appropriate protective measures can often greatly lessen the damage. Furthermore, it should be remembered that MANY OF THE FISHES TAKEN ARE NOTED ENEMIES OF SPORTING VARIETIES in that they feed extensively on spawn of the species prized by man."

In this same bulletin, I am called "One of the most maligned yet one of the most interesting of our avifauna." So you see, what little damage I might do to your fishing pleasure, I compensate by helping you in eating the enemies of game fish. With me, it is a case of fish or starve. Naturally, I catch the fish that are the easiest for me to nab, the slow-moving ones of the shallow water, and game fish are not in that class.

Even though these facts that show that I am not your enemy are undeniable, I still would like to appeal to you from a more spiritual side. In other words, if I am to be your friend, I want you to accept me because you feel that I have as much right here on earth as you have. Even if the facts were reversed and it was found that we both liked the same kind of fish, where did you come upon the idea that the Great Spirit put these fish in the streams as the exclusive and personal property of Man, a member of one class of a subphylum of the thirteenth phyla of the Animal Kingdom, known as a vertebrate, or an animal with a backbone.

Long before Man ever set a foot in Pennsylvania, we Kingfishers gathered our food from its streams. You came to OUR streams and started to take OUR fish. There seemed to be plenty for us both until a group of you SPORTSMEN decided that we Kingfishers might eat a few of OUR fish that you foreigners to our land might catch for your pleasure. So you went to your Legislature and cried to them that those terrible Kingfishers were eating some fish that you might have caught. Because it was a one-sided cry with the defense unable to show you how wrong you were, the Legislature said to you: "Those Kingfishers have no right to live if they are spoiling any of your sport. We'll put them on the unprotected list and allow you to kill them."

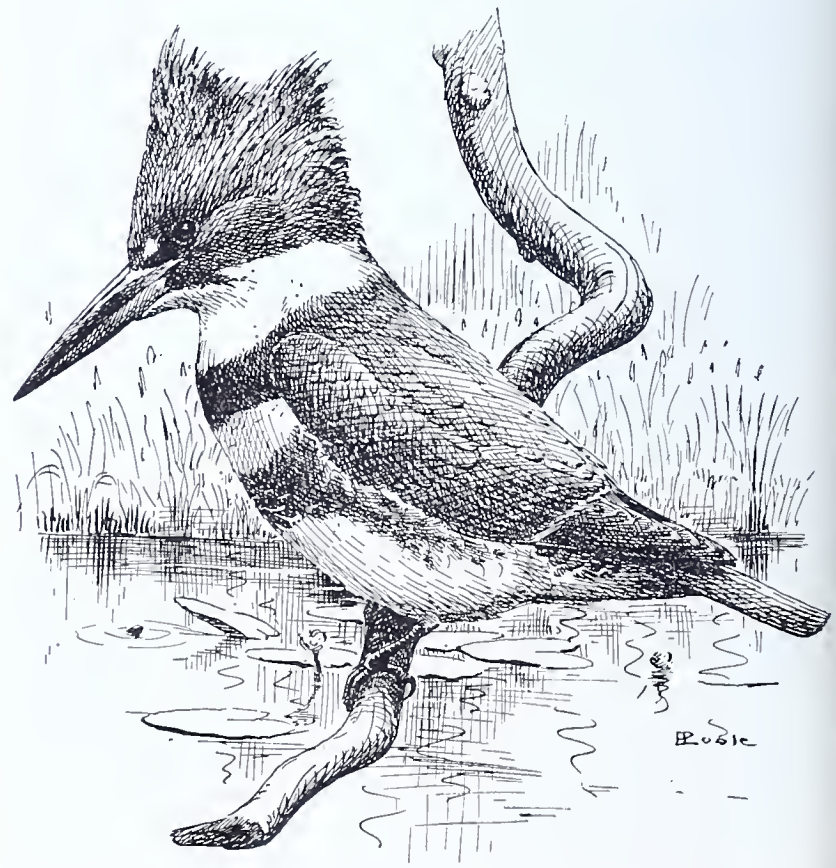
This they did. And kill us you may.

Now if you still feel that the beautiful greyish-blue bird that rattles past you to break the monotony of your quiet fishing trips is not a good pal whose companionship is not pleasant to you; if you still feel that I must die in order that you might not miss even a single possible catch out of millions of fish; if you still feel that even though I do try to kill some of the enemies of game fish I dare not ever be guilty of even an occasional bite of what you consider YOUR fish; if you feel that way, you are not a sportsman and I must die at your hands.

But if you want me to be your fishing pal, then please tell your Legislator that you want me put on the protected list of birds.

Thanks, and happy fishing to us all!

Most sincerely yours,
KINGFISHER.



* Mr. Harrison writes a daily column on birds in the Daily Valley News, Tarentum.

What One School is Doing for Conservation

By Wm. R. Moody

SHOULD instructions on conservation and the basic principles of sportsmanship hold a place in our modern educational system? All broadminded and future-observing individuals will, when asked this question, voice a hearty "Yea!" But mere approvals do not produce results.

One school in the Keystone State has put theory into practice—that school is the Colestock High School, located at Titusville, Pennsylvania. Here may be found a junior sportsman's group which is the largest club of this nature in the entire state.

The Colestock High School Sportsman's Club was organized in the fall of 1935 by William Helfrich and Arthur Brady, faculty members of the school, for boys interested in the preservation of wildlife. The purpose of this club is to mold these boys into the true sportsmen of tomorrow.

Today the club consists of nearly every boy in the school and has won the recognition and esteem of local, county and state conservationists.

With the help of our advisors and the cooperation of the local Game, Fish, and Fire Wardens two distinct kinds of activity engage the attention of the club members. These two types may be classified as indoor and outdoor.

The indoor program consits of the following:

Preparation for Hunting Season — Before the season opens the boys are instructed in the correct methods that should be used in the care, handling, and shooting of firearms. They are also instructed on the Game Laws and taught to respect the rights of property owners.

Rifle Meets—After the hunting season has ended the boys are kept in practice by having organized rifle teams. These teams meet in regular club matches once or twice a month. Each rifleman is taught to shoot from the four recognized positions; namely, offhand, prone, kneeling and sitting.

Regular Meetings—Regular meetings of the club are held bi-monthly in the school auditorium. Here the boys listen to lectures, meet Game Officials, and see movies, all of which are carefully selected in order that they may provide entertainment and at the same time instill in the club members the rules of conservation and the laws by which true sportsmen are governed.

Courtesy Philadelphia Inquirer

School boys putting up and filling food boxes for birds.

It is the belief of all the boys that if the landowners are given the consideration due them they will treat the sportsmen in a like manner. Training of this type is given to every member of the organization.

Annual Sportsman's Show—Each year the club, cooperating with the leading merchants of the town, holds a sportsman's show in the school building. The program for this affair is divided into two parts; the displays, and the speakers and motion pictures. The displays are given ample room in the school gymnasium and consist of sportsman's apparel, equipment and accessories taken from various establishments in the city.

Speakers from the State Conservation headquarters and other sportsman leaders are provided the opportunity to speak to the general public and the club leaders and the work of the club during the previous year is made public.

The outdoor program is where the boys have a chance to put their theories into practical use. All activity is so organized so that there will be something for each member to do during every season of the year.

Dogs—All of the boys are interested in the proper care and training of hunting dogs. Generally helpful hints are suggested and each dog owner profits from the other's advice and observation. Actual training of the dogs takes place before the game season opens and special emphasis is given to the dogs during the hunting season.

Fishing—Titusville is well situated for fishing and nearly every member of the club does some type of angling. Care of the fishing tackle is stressed along with the stocking of streams, fish conservation, and the appreciation of the wooded streams during the different seasons. This year a casting program is under way. The purpose of this program is to instruct the boy in the fine art of bait and fly casting.

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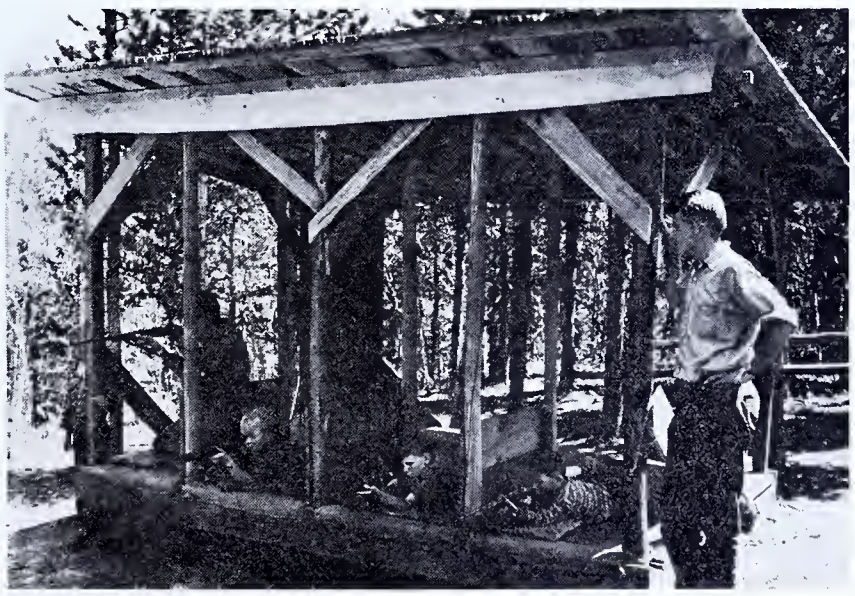


Boys should be taught how properly to handle firearms.

CHESTNUT TREES

★ *By Edward Reeder*

Photo Dept. of Forests and Waters

A stately old chestnut.

AMONG the great host of trees which constitutes a part of our Pennsylvania flora, there is, probably, no single one that has offered more friendly and important contribution to the industrial, agrarian and social development in Pennsylvania history, particularly as it applied to the pioneers, than the Eastern Sweet Chestnut.

Possessed of the quality to grow an extremely valuable wood very quickly, its value was further enhanced by the production of a highly palatable and much sought after fruit or nut. Not only were our forefathers able to build of this tree the homes in which to rear their offspring, stables and barns to shield their stock and store the fruits and grains of a summer's harvest, but they cut and split the trees into long and slender rails, and the materials were built into fences which marked the boundaries from which they drew meagre living, or prevented the farm animals from straying too far afield.

As if that were not enough, this friendly tree added the further welcome of furnishing a delectable filling of nuts for the wild turkey and other fowl which graced the Puritanical table as want decreed. And, if we but knew, there was many a romance which had its inception around a blazing log fire from which were drawn these chestnuts—steamed done.

Aside from an economic standpoint, we cannot overlook the value of the chestnut as it concerns us esthetically. Hardly any of the "old folks" cannot associate the more pleasant memories of youth with the delightful experience of gathering the golden brown nuts following the frosts of September and October. Many a cold and long winter evening has been pleasantly spent and keenly remembered through some association with roasted chestnuts which comprised an important part of a winter's diet. The real joy in their consumption included a roasting in the crackling log fire to which the family was wont to gather in "Snow Bound Days and Nights."

With the advent of steam, telegraphy and the telephone, the march of civilization was ever directed toward a setting sun. The chestnut, again, was found new and important. Proving especially durable when in contact with soil, it made admirable stock on which to lay the long, ribbon-like railroad steel as well as uphold the thin strands of wire which comprise the vast and intricate system of the telephone. There is scarcely a community anywhere which does not receive the magic power of electricity delivered over chestnut poles. The desire for using chestnut for post or pole purposes is based upon the quality of durability when placed on or in the ground. The straight, upright and slightly tapering stems are adjuncts to already arresting qualities.

Until recently, the chestnut has performed a miracle which, although of the highest importance, may have escaped the attention of all except the more observant. This concerns the feeding of the forest populace. This tree could be depended upon to produce an abundant crop of nuts yearly, and of this splendid crop there was sufficient to feed well, most of our game birds as well as those animals of vegetarian and omniverous characteristics. Any program involving artificial feeding, when done to some degree of thoroughness, will quickly bring home the value of this nut as a life sustaining medium. The rehabilitation of a disease resisting variety in our state would automatically result in the saving of countless lives of our forest denizens and thousands of dollars spent annually for artificial feeds.

It is presumed that most of you are aware of the cause of the disappearance of the chestnut from our eastern forests. The Chestnut Blight or bark disease, appeared in the vicinity of New York City about 1904, and spread in ever widening circles. From this point, it has virtually annihilated our existing stands. This fact is particularly lamentable, because it came at a time when public

(Continued on Page 32)

Some day the chestnut may again take its place as Pennsylvania's finest nut tree.

SPORTSMEN! LOOK AHEAD!!

By ROBERT STEVENTON*

CONSERVATION is not a new idea in Pennsylvania. Almost a half century ago Dr. Joseph Kalbfus became the first secretary of the Game Commission and proceeded to set before the people of Pennsylvania the principles of conservation he had learned while living in the West. For many years the Game Commission, the Fish Commission and the Department of Forests and Waters have done much that may be classified as conservation. The sportsmen of Pennsylvania have contributed in more ways than space in this discussion will permit. In recent years many other organizations have become conservation-minded, and are contributing as they can.

On February 12, 1938 the Pennsylvania Federation of Sportsmen's Clubs decided that more progress must be made. A Committee on Conservation Education was appointed to investigate the possibilities of teaching conservation in the schools of this Commonwealth. The question then arose what could such a committee accomplish. I shall list a few things this committee has done and may do. First the committee secured permission from the Department of Public Instruction to allow any high school in Pennsylvania to offer a course in conservation for one semester provided an outline of the proposed course has been approved. A course of this kind shall be credited one-half Carnegie unit. At the same time any teacher qualified to teach science will be qualified to teach conservation.

Then, some months later, this committee called together persons representative of the interested groups. These persons were Dr. F. B. Haas, Dr. P. L. Cressman and Miss L. M. Clark of the Department of Public Instruction; Mr. R. L. Emerick and Mr. C. E. Baer of the Department of Forests and Waters; Mr. Seth Gordon and Mr. L. A. Luttringer, Jr., of the Game Commission; Mr. C. A. French and Mr. M. E. Shoemaker of the Fish Commission; and the writer representing the Pennsylvania Federation of Sportsmen's Clubs. During the discussion the following matters were considered. First, the possibility of a bulletin or bulletins to meet the needs of teachers was discussed. To this end, it was suggested that a committee to develop or revise materials be appointed. Such a committee might include successful teachers and representatives of interested groups and members of the Pennsylvania State College Nature Camp. The groups or departments especially interested in conservation should help to determine what should be taught; the Department of Public Instruction and other educators should be responsible for recommending sound educational approach and procedures.

Second, the possibility of increasing the amount of informational material on the reading level of the elementary shcool child was considered. In this connection Mr. M. E. Shoemaker has developed some excellent material on fish that may be used in elementary grades. Similar work in other fields is being prepared.

Photo by the author

Group of teachers on early morning bird hike at Tennessee Summer Conservation School for teachers.

Third, and an important consideration, was the possibility of promoting conservation education by means of contacts with teachers in service through institute lectures, and with key groups of lay people such as service and civic clubs, etc. The response to contacts made with many county superintendents has been very favorable.

Fourth, and perhaps the most important consideration, was the possibility of adding courses in teachers colleges to train teachers in conservation education. It was suggested that a schedule of two lectures at each of the State Teacher's Colleges might be arranged for the coming year by the Game Commission, Fish Commission and Department of Forests and Waters. An itinerary is now being arranged for lectures from these groups.

During the last week of June the writer, who is the chairman of the Committee on Conservation Education, had the privilege of observing the set-up as it is functioning in the most progressive conservation-education state in the union, Tennessee. What is being done in Tennessee can be done in Pennsylvania. May I review it briefly? First, let us understand that Tennessee has the advantage of a Conservation Department with the following divisions: Forestry, Geology, Game, Fish, State Parks, and State Information. This department has an Educational Service Staff consisting of John C. Caldwell, James L. Bailey, an assistant, a photographer, and a secretary. The Educational Service was organized in 1937 as an integral part of the conservation program. Its primary object has been, very simply, to establish the teaching of conservation in the schools. These men realized they could not stimulate a general conservation consciousness by laws and regulations. Conservation concepts must be taught in early youth—people must be sold on conservation. They visited each school to see what was being taught and what could be done. Keeping in mind that children "learn by doing", they located on or about the school grounds great opportunities for teaching wise land use. To stop land erosion, stakes are driven into the ground, dead trees are thrown across the stakes, stones and broken sticks are woven in front of the dead tree, grass, lespedeza, shrubbery and trees are planted. Here the child can learn a lesson that the contour of land and our system of agriculture and our wildlife habitat will never be perfect as long as a drop of muddy water runs away. What can be more important than to check this soil, to keep this land from running away from you?

Roots will not let all the water run down hill. This was demonstrated on a field trip taken by teachers who attended the summer school conservation classes to the top of Roan Mountain about six thousand five hundred feet above sea level. A spring was running about fifty yards from the crest of the mountain. The people of Tennessee are beginning to realize that conservation is not just a word; it is a way of living and an area of living.

In conjunction with professors of education Mr. Caldwell and Mr. Bailey teach classes in conservation for six weeks at Norris, a town on the Tennessee Valley Authority, during the summer. Credit is given for a course in science education at Tennessee University at Knoxville a few miles away. The location at Norris is used because of the value of local field trips. Mr. Caldwell and Mr. Bailey also have charge of classes at some of the Teachers Colleges Summer Schools.

The question arises, what can these men teach teachers? In general, conservation education for children is given for the teacher

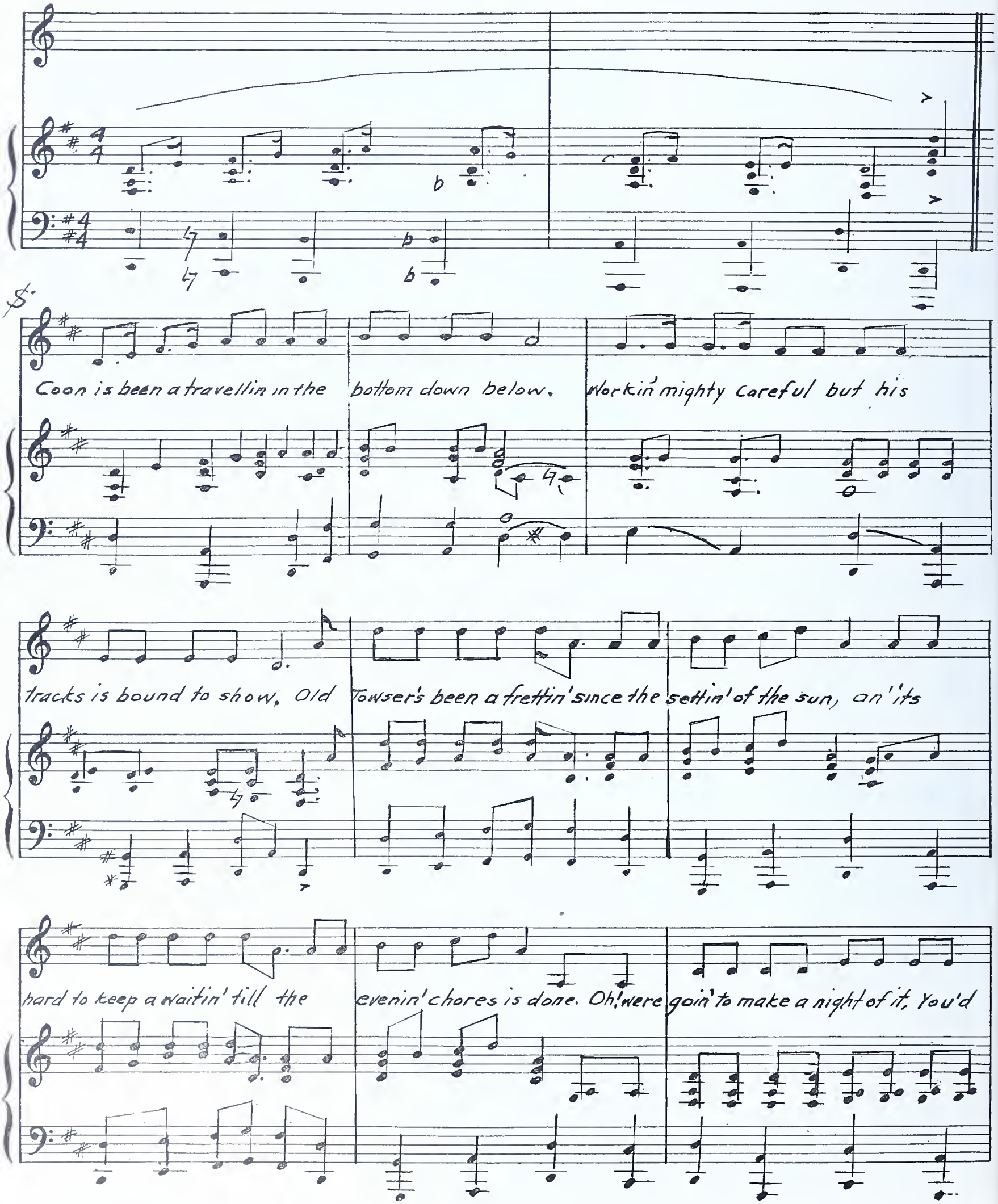
(Continued on Page 29)

* Chairman, Conservation Education Committee, Penna. Federation of Sportsmen's Clubs.

COON HUNT

Words and Music by
FRANK P. PLESSINGER*

Arranged by
WALTER JAMES



*Copyrighted 1940 by Frank P. Plessinger, who retired from the Commission's Division of Lands in March after having contributed outstanding service for many years in Land Engineering and Land Titling work. The music of his song is a simple melody of the hills inspired by a Berks County Coon Hunt in the Blue Mountains. Game News is grateful beyond words to be given the chance to publish this innovation first.

COON HUNT

better get your gun, for we're not a comin' home until the mornin'

Interlude

Rit

fine

Second Verse —

Dark am gettin' darker an' the brush is mighty thick,
Work along the meadow land that borders on the creek.
The old dog starts a runnin' an' you sure can hear his song,
He's a matin' hunters music as the echoes roll along.
Hark! the pup joins in the Chorus ringin' like a dinner gong
Come, we're not a goin' home until the mornin'.

Third Verse —

Nearly out of hearin', must have gone a mile away,
Circlin' thru the timber tract some nearer now, an say,
They're gettin right upon him, Give that lantern here to me.
If he's takin to the water we may lose him yet you see,
Oh, Glory hallelujah! They have got him up a tree
Now, we're not a goin' home until the mornin'.

THE DEER DILEMMA

By JOHN M. PHILLIPS

Heavily browsed deer range.

IN order to reduce our deer and prevent their starving during our severe winters, at a meeting in Harrisburg on July 10, our Game Commission and the leaders of the thinking sportsmen of the state wisely decided to declare an open season this year on both bucks and does. However, to make the hunter look closely before shooting and thus protect human lives, they also decided upon a closed season for spike bucks.

Mr. Leffler, President of the Commission, stated that: "Field representatives reported that in the deer country from 75 to 90 percent of the many thousands of trees, shrubs and food plots planted by the Commission were destroyed by the deer and that planting grain plots to furnish food for small game and to relieve damage to neighboring farms is of little value wherever deer are plentiful."

Despite the feeding campaign conducted by the Game Commission and sportsmen last Winter the Commission estimates that more than 9,000 deer died of starvation. Many were found in and along the streams and the April trout fishermen say the stench from the decaying carcasses was nauseating and the water not fit to drink.

It is variously estimated that there are from 500,000 to a million deer in the state. They have not only destroyed their own food so that many thousands die during the winter, but have destroyed the ground food and cover for small game, which gives sport to the great majority of our hunters. Our cottontails and snow-shoe rabbits, grouse and wild turkeys are disappearing in many sections where deer are too plentiful.

Our farmers are complaining of the depredations of the deer and point out that it is impossible to grow certain crops or plant an orchard without surrounding it with an eight-foot deer proof fence. Because of the destructiveness of the deer, some farms are even being abandoned which depreciates the value of rural land.

Like the Game Commission, our Forestry Department is complaining bitterly that it is impossible to plant trees in deer country.

Several hundred automobiles are wrecked and people injured during the year by deer. If cattle were doing this, the owners would be liable for damages.

Thousands of deer suffer the pangs of slow starvation, only to die a lingering death in our forests every winter. To prevent this cruelty to animals, the Humane Society would have been forced to take action if the sportsmen had not done so themselves by starting a movement to reduce the herd to a point where the deer can obtain sufficient food.

My friend, George Shiras, III, noted author and wildlife photographer, who is perhaps the leading authority on deer in the country, tells clearly of what happens to forest and small game, and even land through the overbrowsing of deer in the following article. The most striking thing about his dissertation is the date upon which it was written, namely 1896.

COLLATERAL EFFECT OF OVERBROWSING

Extract from the Second Edition of "Hunting Wild Game with Flashlight and Camera."

By George Shiras III, Published 1896.

"In the extensive study of isolated tracts denuded of ground vegetation or where trees were trimmed as far as a browsing animal could reach I paid little attention, at the time, to the effect these changes would have on the welfare of many birds and smaller animals.

"However, in a retrospective consideration of these sections in which moose and deer had suffered starvation I can now recall a marked absence of the smaller forms of life.

"I had sometimes wondered why I had seen no grouse and few other land birds on Grand Island, St. Ignace Island, Presque Isle and Isle Royal in Lake Superior, or elsewhere in which much of the plant life had been destroyed.

"When one realizes what effect the absence of ground vegetation, or of saplings, bushes bearing buds, berries and seeds, has upon the food supply and shelter of many birds and animals it is not strange that they have deserted such places.

"Moreover, when the forest floor becomes bare, dry and sterile, then grubs, worms, ants and smaller insects disappear, depriving most insectivorous birds of their customary diet. Even the black bear, bulky as it is, is largely dependent upon berries, roots, grubs, mice and ant eggs, so it suffers accordingly in over-browsing areas.

"As a further result of these conditions rabbits, ground squirrels, moles and mise suffer equally from the lack of food, affecting in sequence predatory animals and birds such as foxes, skunks, weasels, lynxes, hawks and owls.

"When the equilibrium maintained by nature is thrown out of balance it disrupts a system of interdependence based upon centuries of mutual adjustment. This must be recognized if we are to get at the foundation of many problems now confronting the zoologist or the game conservationist."

Thousands die of starvation every winter.

FOXY BUSINESS

By DOUGLAS WADE

BEGINNING July 1, the little red fox, in 26 north central and northwestern counties in Pennsylvania, started singing a new version of the famous song. This time, the theme is, "I'm Worth Four Dollars, More or Less". Despite the fact that this new ditty is catchy, the Game Commission no doubt will be facing another administrative headache in listening to this song sung over and over. Throw together into a grand free-for-all a group of farmers suffering from stock and poultry losses; fox trappers and hunters complaining of the low value of red fox pelts; fox trappers and hunters desiring a closed season on foxes; "fox chasers" riding to the hounds, crying "Tally Ho", but not always dispatching their quarry; a very large number of sportsmen blaming the foxes for any or all decreases in small game; and a few lonesome individuals seeing some value in predators; and you have a picture of what the Game Commission must contend with.

However, in all fairness to the fox, pro-foxers, anti-foxers, and the Game Commission, it should be clearly understood that before a bounty was replaced on the red fox, a very thorough study was made by the fact-finding division of the Game Commission. Undoubtedly this study is one of the most comprehensive of its type made to date. Furthermore, this study will not stop at a preliminary survey, but will continue in an attempt to uncover and to probe into basic factors governing predation.

Since it is known that the fox studies will be carried on, let us examine a few of the possible avenues of attack in getting a better slant on the question of fox predation.

Red Foxes taken in Tioga County in 1923.

Historical

Rhoads *(Mammals of Pennsylvania and New Jersey)* and Seton *(Lives of Game Animals)* have pried into the history of the red and gray foxes in the eastern States. We therefore tentatively state that the red fox now present in the Southern part of Pennsylvania may be a mongrel fox—a cross between the northern red fox which probably moved southward from Canada, and the English red fox which was imported during Colonial days by fox chasing groups. In all probabilities, the original range of the red fox, native to Pennsylvania, was confined to the northern tier of counties. The first written record of a red fox killed outside the southeastern part of the State came from Perry County in the year 1787. In 1717 in southeastern Pennsylvania, a bounty was placed on red fox pups. New Jersey previously had placed a bounty on red foxes in 1714.

In 1897, according to Rhoads, the red fox was more abundant in the State than the gray fox. Our surmise today, based on the recent survey of foxes, would be that there is an equal number of each with possibly a greater number of grays.

Little is known of the fluctuations in population of the two fox species during the history of the State. Leopold, in a game survey of the north central states, found that grays replaced reds, and in turn reds came back in certain instances to replace grays. In Pennsylvania, since about 1925, there appears to have been a steady spread of gray foxes into regions of the State wherein they had been previously absent or scarce. For example, since 1931 gray foxes have been appearing in Crawford, Forest, and Erie Counties. During the period around 1900, when Rhoads was making his studies, gray foxes were absent or very rare in Chester, Delaware, Montgomery, and Washington Counties. Today, gray foxes are to be found in every county in the State—in fact, gray foxes from every county have been probated for bounty. Rhoads also estimated that the red to gray fox ratios in the northern part of the State varied from 9.1 to 20.1. Today these ratios are more equal, indicating that probably there are more gray foxes in the northern part of the Commonwealth than at the time of Rhoads' survey.

In summary, the historical side of the red and gray fox study is represented very meagrely. Additional information will enable fact-finders to determine why areas within the State occupied by red foxes and gray foxes have enlarged and during what periods these increases occurred.

Distribution and Status of Foxes

This phase of the study is closely connected with the historical approach. Though an analysis of the red and gray fox takes over a twenty-year period, it is possible to figure the take per square mile. For example, the annual average take of red foxes in the State for the past twenty years (based upon figures derived from fur dealers' reports) has been 5,071 animals. Reduced, these figures mean that one red fox has been taken for every 8.8 square miles of the State per year. The annual gray fox take in the State (based upon bounty records) over a twenty-year period was 8,074. This figure reduced to an area take would be one gray fox taken for every 5.5 square miles per year.

Both species of foxes are to be found in every county in the State. The status of the gray fox has been well worked out by counties. At the present time, some of the heavily populated gray fox counties are Cameron, Clinton, Centre, Mifflin, Fayette, Pike, Wayne, and Bucks. The gray fox take in Clinton County, during the fiscal year of 1938-39, was one gray for every 1.3 square miles. In contrast, one gray fox was taken for every 156 square miles of Erie County during the same period.

The status of the red fox is less clear, but from all indications the northern tier of counties and certain counties in the southwestern and southeastern part of the State are the heaviest centers of population. It will be possible to arrive at fairly satisfactory figures for the status of the red fox after the results of the current fox survey have been analyzed in more detail.

The Commission will map the distribution and status of the gray fox in the entire State and the distribution and status of the red fox in the 26 northern counties from whence a red fox may be presented for bounty. After a few months, there will be an opportunity to inspect the most heavily populated areas and to determine the reasons for the heavy numbers of foxes. Out of the findings may come some very excellent ideas as best how to control foxes in some of the concentration areas.

Furthermore it will be important to discover areas in the State supporting no fox

(Continued on Page 31)

SPORTSMEN'S QUERIES

By CHARLES F. STAMBAUGH

REPEATING SHOTGUNS

Q. Does limiting the capacity of a repeating shotgun to three shots apply only to migratory wild fowl or does it pertain to all forms of game? When did this law come into effect?

Z.B.—Philadelphia, Pa.

A. The Pennsylvania Game Law does not require repeating shotguns to be plugged or otherwise mechanically limited to a capacity of three shells when hunting native game, such as rabbits, squirrels, pheasants and quail, so long as the gun does not contain more than three shells in the magazine and chamber combined. But when migratory game birds of any kind are hunted in this State, the hunter is required, under Federal Law, to use a repeating shotgun whose capacity is definitely limited to three shells. **The safe thing to do is to plug the magazine** of all repeating shotguns used for hunting purposes in Pennsylvania, to avoid the possibility of running afoul of the law. Our State law limiting repeating shotguns to three shells became effective June 3, 1937.

* * *

SALE OF FANCY PHEASANTS PERMITTED

Q. I have a number of pheasants of mixed varieties such as Mutants, Versicolors, and Black-backed Kaleeges. Is it legal to trade them for some Bantams, without possessing a propagating permit?

S.L.F.—Allentown, Pa.

A. Yes. The Game Commission has ruled that any of the fancy or aviary species of pheasants, not found in a wild state in Pennsylvania, are not subject to the restrictions of the Game Law. We therefore consider it unnecessary to have special permission to sell the fancy species of pheasants to which you refer, or exchange them for Bantams. You must not attempt to sell or exchange any pheasants closely related to our ringneck or Reeves.

* * *

FROG SHOOTING

Q. Is it legal to shoot frogs in the State of Pennsylvania? Do you need a hunting license, a fishing license, or both?

B.V.S.—Scranton, Pa.

A. Yes, it is permissible to shoot frogs in this State during the open season, July 2 to October 31, Sundays excepted, provided you are in possession of a fishing license. A hunting license is not required. Frogs come within the jurisdiction of the Board of Fish Commissioners, which requires a fishing license to take them in any manner whatsoever. Frogs may not be shot or otherwise taken through the use of artificial lights.

* * *

DIGGING OUT GROUNDHOGS, AND USING DOGS

Q. Is it legal to dig out groundhogs if you obtain permission from the landowner? Also, can you use a dog?

J.A.—Natrona Heights, Pa.

A. You may dig woodchucks or groundhogs out of dens in cultivated fields during the open season, July 1 to September 30, Sundays excepted, by **first** obtaining permission of the occupant of the farm. The law further requires that immediately after removing the groundhog, the hunter shall replace the earth and level off the area dug out. The use of dogs to hunt groundhogs is not permitted until August 20, the opening of the dog training season.

* * *

TAKING MOUNTED DEER HEADS OUT OF STATE

Q. I have three mounted deer heads which I wish to take with me to California. Is there any law governing such removal from the State?

G.H.W.—Roaring Branch, Pa.

A. While the Pennsylvania Game Law forbids the removal out of this State of game killed in a wild state within the Commonwealth, it permits the removal from the State at any time of mounted specimens of game, lawfully taken, if these specimens are being transferred as part of the personal effects of the owner. Assuming that the three mounted deer heads to which you refer were lawfully taken, you will not require a permit of any kind to remove them to California as part of your personal effects.

* * *

LOSS OF PART OF HUNTER'S LICENSE

Q. I am anxious to go groundhog hunting and I cannot find the part of my license with my signature. What shall I do in order to hunt?

R.R.—Mountville, Pa.

A. If you have that portion of the license certificate containing your name, address, description, etc., it will be satisfactory for you to sign your name on any convenient portion of that card, so long as it does not obliterate the information on the original license. However, if you lost the entire license certificate, it will be necessary for you to obtain a replacement license which can be done for a fee of $1.00 by making application to the Department of Revenue at Harrisburg or the agent who issued the original license. Even though you lost your license, you must not hunt any wild birds or wild animals without possessing a proper hunter's license certificate.

* * *

POSSESSING LIVE SKUNKS

Q. Recently a litter of young skunks came from under a chicken coop after I had killed the mother. I gathered up the young ones, put them in a pen and have been feeding them. Could I obtain a permit to have their scent glands removed and keep them as breeding stock?

A.M.—Scottdale, R.D. No. 1, Pa.

A. As protection has been removed on all skunks in Pennsylvania until October 1, 1941, we see no objection to your retaining the litter of young skunks which you obtained after the mother skunk was shot. Should you desire to have their scent glands removed, you may do so. However, if you intend to raise skunks for profit after October 1, 1941, using these animals for stock, you will require a fur-farming permit issued by the Game Commission for a fee of $5.00 a year. It is expected that the skunk will be returned to the list of fur-bearing animals on that date.

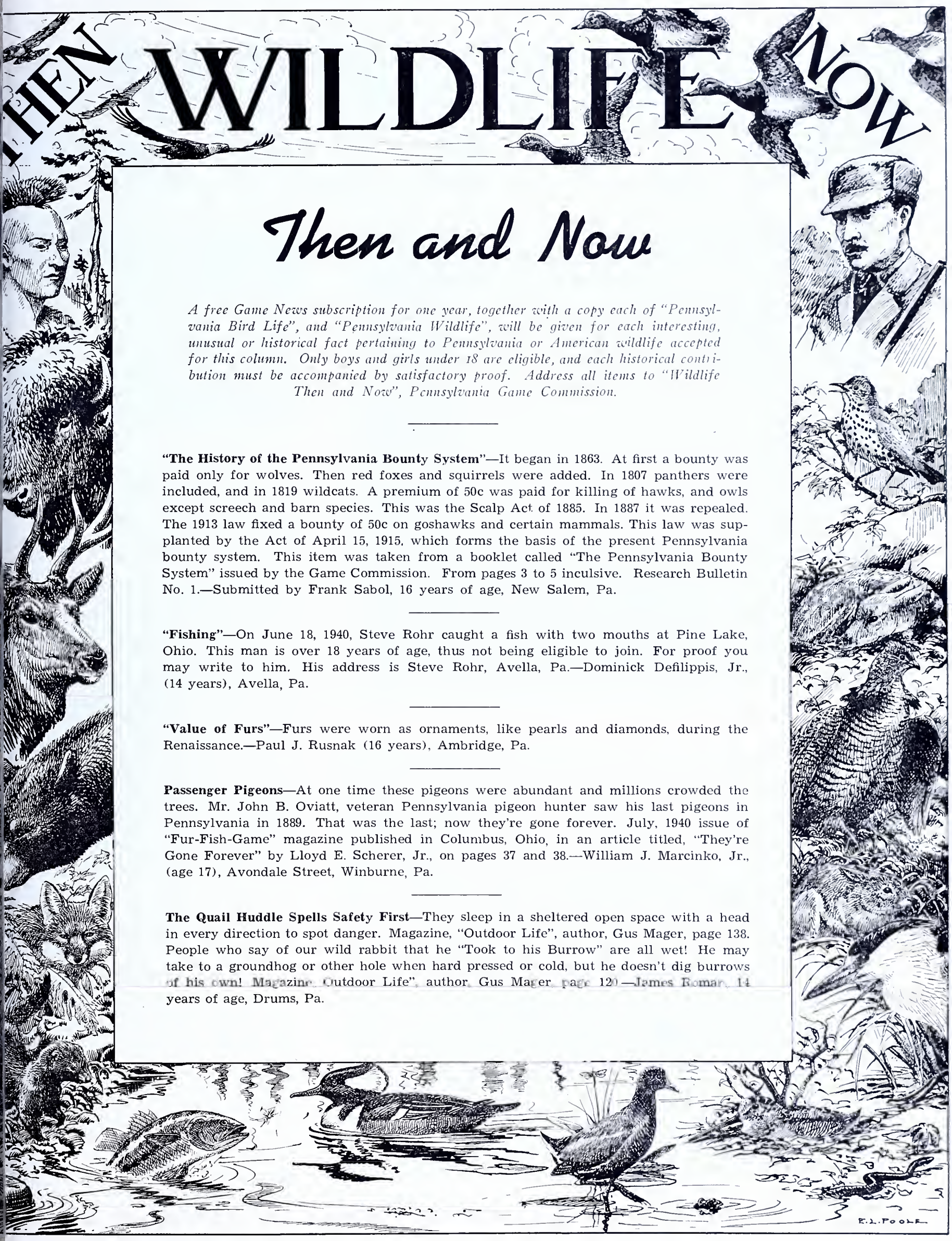
* * *

HUNTING RIGHTS OF GOVERNMENT EMPLOYES

Q. I am at present and have been for the past four years living in Washington, D. C. and in nearby Virginia. I am a Federal employe under civil service. Prior to this employment I was a lifelong, bona fied resident of Pennsylvania. Has my acceptance of Federal employment, which requires my living in Virginia, caused the forfeiture of my right to secure a resident hunter's license in Pennsylvania? I have never voted in Virginia, or elsewhere than in Pennsylvania.

T.H.O.—Arlington, Va.

A. Whether you surrendered your right to hunt in this State on a resident license depends upon whether you transferred your legal residence to another State when you accepted a civil service appointment. If you continue actually to maintain your legal residence in Pennsylvania for voting and other purposes, you are entitled to claim this State as your residence for hunting purposes and take out a resident hunter's license, regardless of the fact that you may be living outside the State in the performance of your duties for the Federal Government. But you cannot take any game out of the State with a resident license.



Then and Now

A free Game News subscription for one year, together with a copy each of "Pennsylvania Bird Life", and "Pennsylvania Wildlife", will be given for each interesting, unusual or historical fact pertaining to Pennsylvania or American wildlife accepted for this column. Only boys and girls under 18 are eligible, and each historical contribution must be accompanied by satisfactory proof. Address all items to "Wildlife Then and Now", Pennsylvania Game Commission.

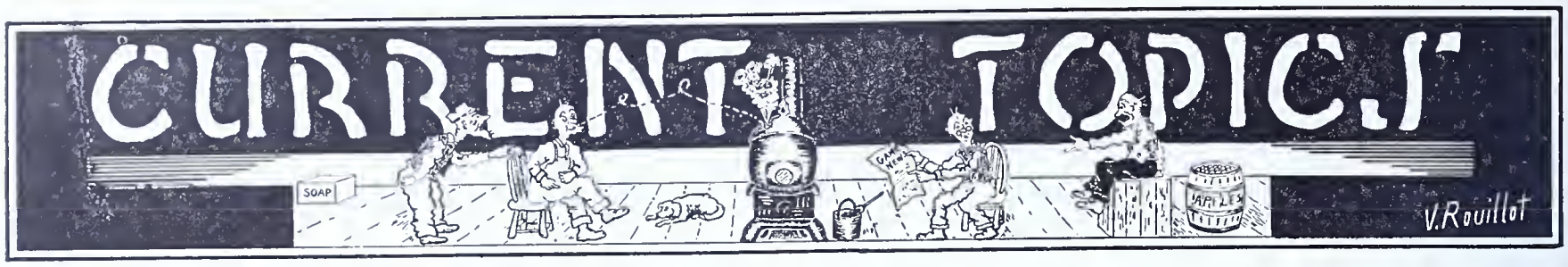
"The History of the Pennsylvania Bounty System"—It began in 1863. At first a bounty was paid only for wolves. Then red foxes and squirrels were added. In 1807 panthers were included, and in 1819 wildcats. A premium of 50c was paid for killing of hawks, and owls except screech and barn species. This was the Scalp Act of 1885. In 1887 it was repealed. The 1913 law fixed a bounty of 50c on goshawks and certain mammals. This law was supplanted by the Act of April 15, 1915, which forms the basis of the present Pennsylvania bounty system. This item was taken from a booklet called "The Pennsylvania Bounty System" issued by the Game Commission. From pages 3 to 5 inculsive. Research Bulletin No. 1.—Submitted by Frank Sabol, 16 years of age, New Salem, Pa.

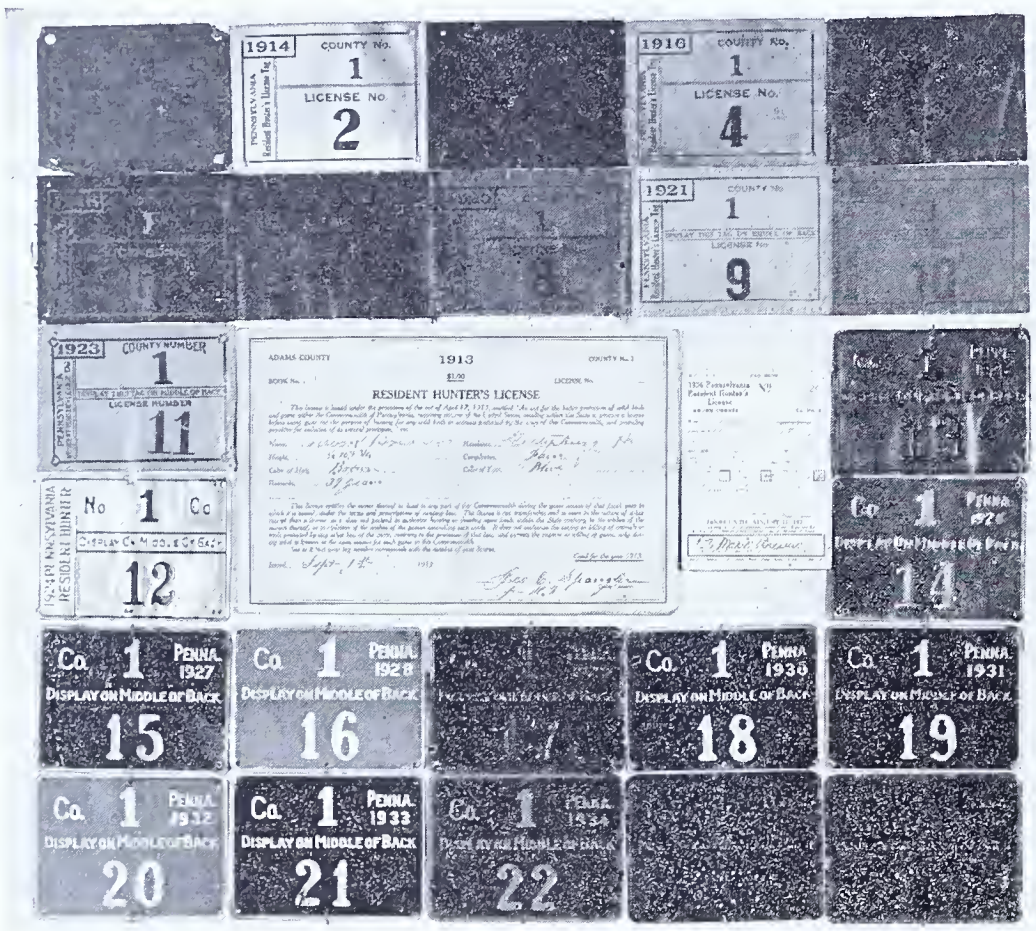
"Fishing"—On June 18, 1940, Steve Rohr caught a fish with two mouths at Pine Lake, Ohio. This man is over 18 years of age, thus not being eligible to join. For proof you may write to him. His address is Steve Rohr, Avella, Pa.—Dominick Defilippis, Jr., (14 years), Avella, Pa.

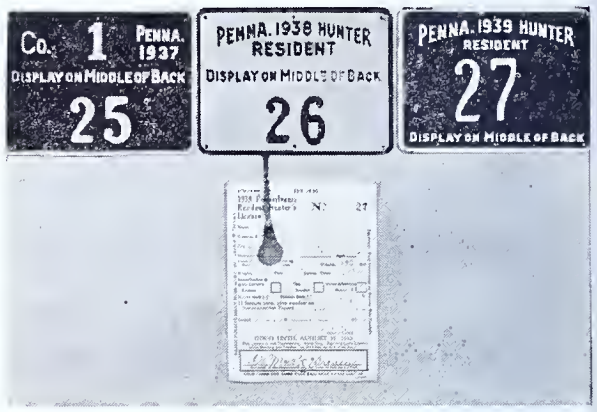
"Value of Furs"—Furs were worn as ornaments, like pearls and diamonds, during the Renaissance.—Paul J. Rusnak (16 years), Ambridge, Pa.

Passenger Pigeons—At one time these pigeons were abundant and millions crowded the trees. Mr. John B. Oviatt, veteran Pennsylvania pigeon hunter saw his last pigeons in Pennsylvania in 1889. That was the last; now they're gone forever. July, 1940 issue of "Fur-Fish-Game" magazine published in Columbus, Ohio, in an article titled, "They're Gone Forever" by Lloyd E. Scherer, Jr., on pages 37 and 38.—William J. Marcinko, Jr., (age 17), Avondale Street, Winburne, Pa.

The Quail Huddle Spells Safety First—They sleep in a sheltered open space with a head in every direction to spot danger. Magazine, "Outdoor Life", author, Gus Mager, page 138. People who say of our wild rabbit that he "Took to his Burrow" are all wet! He may take to a groundhog or other hole when hard pressed or cold, but he doesn't dig burrows of his own! Magazine, Outdoor Life", author, Gus Mager, page 120.—James Roman, 14 years of age, Drums, Pa.







THE HUNTING LICENSE

Gettysburg, July 10—F. Mark Bream, one of the most ardent sportsman in Adams County, who recently retired as one of the city mail carriers here was at Harrisburg today, to attend the unveiling of the bronze tablet in memory of Dr. Joseph Kalbfus, secretired as one of the city mail carriers here, was at score of years.

When he went, Mr. Bream, who was one of the organizers and first president of the Adams County Fish and Game Association, took with him his collection of hunting licenses and presented them to the State Game Commission to be kept on display in the Commission rooms at Harrisburg.

When the law was passed twenty-seven years ago requiring hunters to take out a State license before they could go into the woods to shoot game, Bream asked to be granted license No. 1 and each year he has obtained the next highest number. He has this collection of license cards and plates arranged in order in a large frame for convenient display.

LEGAL NOTICE

Removal of Protection From Opossums

A report having been submitted to the Commission indicating that an over-supply of opossums exists throughout the Commonwealth, and the trappers, due to general economic conditions, have not reduced the numbers of such animals as anticipated, the Commission, after a full discussion, upon motion made, seconded and agreed to this 11th day of July, 1940, adopted findings of fact and resolutions as follows:

Findings of Fact

The Pennsylvania Game Commission finds as facts that the opossum population throughout the Commonwealth of Pennsylvania increased to an unreasonable degree in recent years due to economic conditions and low average fur prices, also due to the further fact that large numbers of our citizens who formerly trapped extensively have been employed on various kinds of relief work and not running trap lines, and that to lessen the danger of disease epidemics, to alleviate widespread complaints of destruction of nests of birds, and to enable the Commission better to extend its research studies of these animals, the numbers thereof should temporily be further reduced by removing the opossum from the list of protected fur-bearing animals for a limited period.

Resolutions

WHEREAS, After due investigation and information otherwise obtained by the Pennsylvania Game Commission, the Commission finds as facts and is of the opinion that to assure the maintenance of an adequate and properly balanced future supply of game birds, game animals, and fur-bearing animals in said Commonwealth it is necessary temporarily to remove the opossum from the list of protected fur-bearing animals, under the powers and authority vested in the Pennsylvania Game Commission in accordance with the provisions of Articles I and VI, Sections 101 and 601 respectively, of the Act of Assembly, approved June 3, 1937, P. L. 1225, as amended, entitled "An act concerning game and other wild birds and wild animals; and amending, revising, consolidating and changing the law relating thereto";

THEREFORE, BE IT RESOLVED, That the opossum be and is hereby removed from the designated list of protected fur-bearing animals throughout the Commonwealth of Pennsylvania, said action to be effective immediately and continuing in effect to and expiring at midnight on September 30, 1941, unless rescinded prior thereto, during which period it shall be lawful to take opossums at any time and in any manner, including digging or smoking them out of their dens, except through the use of poisons, explosives and chemicals; it being understood and agreed that this resolution does in no way modify, or attempt to modify, the law with reference to the use of traps or deadfalls; and

BE IT FURTHER RESOLVED, That notice of the foregoing action shall be duly published in accordance with the provisions of Section 505 of Article V of the act aforesaid as part of the advertisement of open hunting and trapping seasons for the current year, and the Executive Director of the Commission is hereby authorized and directed to certify the same as and for the act of the Pennsylvania Game Commission.

I hereby certify the above to be a full, true and correct copy of resolutions removing opossums from the list of fur-bearing animals until midnight, September 30, 1941, as adopted by the Pennsylvania Game Commission at a meeting held July 11, 1940; and that notice of such action has been or will be duly published in two newspapers (where there are that many) of general circulation in each county of the Commonwealth of Pennsylvania as required by the Act therein cited.

SETH GORDON, Executive Director,
Pennsylvania Game Commission.

The Newportville Rod and Gun Club purchased 100 pounds of the Pennsylvania Game Food Plot Mixture from the Phila. Seed Co., on May 3 and distributed it within a week.

CURRENT TOPICS

SURPLUS FISH TO BE REMOVED FROM THE PYMATUNING REFUGE

Since fishing is not permitted in the Pymatuning State Game Refuge in Crawford County, the fish supply therein has materially increased during the past four or five years. The refuge, comprising 3,670 acres, of which approximately 2500 acres are under water, is maintained primarily to furnish feeding, resting and nesting ground for wild waterfowl. However, an abundance of upland game likewise finds a haven of safety on the 1170 acres of dry land within the confines of the refuge. If fishing were permitted within the refuge, migrating waterfowl and nesting birds, both waterfowl and upland game, would be disturbed to an unwarranted degree.

Efforts have been made by both the Fish and Game Commissions to prevent carp from getting into the upper dam of the Pymatuning Reservoir Project, that is, the refuge area, but unfortunately they are now present in huge numbers. Since they are destructive to marsh and acquatic vegetation essential as food for wild waterfowl, it is evident that their numbers must be kept under control in the most practical manner.

The Fish Commission, realizing the unsatisfactory condition of affairs in the refuge water and desiring to prevent the fish fauna from being reduced by disease which might occur from over-crowding, agreed to remove fish and spawn to other waters in the State whereby the general public can derive some benefit from the surplus crop.

Removal of fish and spawn will be conducted to the extent of bringing about and maintaining a more even balance of fish fauna within the 2500 acres of water in the refuge. During the open hunting season for migratory birds, removal of fish and spawn will be restricted to areas roughly described as situate North of Ford Island, on which the Pymatuning Migratory Bird Museum is located, and extending to the mainland South of the Town of Linesville, comprising only a few hundred acres.

Each trap or net set will be plainly marked by a flag or some other suitable device in order to prevent damage by or to boats or boaters used for official purposes by both Commissions.

The Game Commission has agreed to the Fish Commission constructing and maintaining such buildings as may be required for the storage of boats, nets and other equipment, near the water's edge on the mainland about midway between Ford Island and Linesville.

Approval of the Department of Forests and Waters was first secured to this cooperative venture of the Fish and Game Commissions, since that Department has legal jurisdiction over the entire Pymatuning Reservoir Project. By appropriate agreement, in 1937, the Department of Forests and Waters, through the Water and Power Resources Board, had given the Game Commission control over all wildlife within the 3,670 acres set apart as a refuge.

IN MEMORIAM

Another former member of the field staff, one who served the Commission and the sportsmen well for almost seventeen years, passed away on July 24, 1940.

William L. Ibach spent all the years of his service as the Game Protector in charge of Lebanon County, retiring November 1, 1930. Funeral services were held in Newmanstown on July 27, and were attended by both field and office representatives of the Commission.

"Billy" as he was affectionately called by his many friends, like all the other retired employes of the department, continued to maintain his interest in the work after he left the service.

APPOINTMENT OF SURVEYOR

James S. Arthurs, of Brookville, Jefferson County, has been appointed Junior Land Engineer in the Division of Lands, effective July 1, 1940. He filled the vacancy created by the retirement of Mr. Frank P. Plessinger which took place in March of this year.

Mr. Arthurs has been doing survey work for the Game Commission on a per diem basis since August 1929. During that time he aided in surveying the boundary lines of 200,000 acres of present and prospective State Game Lands.

Land surveying, and in particular retracing old surveys on forest lands, is an art acquired only by experience. Mr. Arthurs' experience and his familiarity with requirements of the Division of Lands will prove of great value to the Game Commission in its Land Acquisition Program.

OFFICIALS PAY TRIBUTE TO NATURALIST HOWELL

Acting Director W. C. Henderson and other officials of the Fish and Wildlife Service, United States Department of the Interior, paid high tribute recently to the character and scientific attainments of Arthur H. Howell, veteran scientist who died July 10 at Emergency Hospital in Washington, D. C., following a cerebral hemorrhage that overtook him at his work on July 9.

A noted naturalist and an authority on the scientific classification of mammals and birds, Mr. Howell had served the Federal Government for more than 45 years. At the time he was stricken he was examining a tray of squirrel specimens.

Mr. Howell began his Federal service with the Bureau of Biological Survey at the age of 23, working first in northern Montana. His periodical field service had taken him to many western States, but his most notable work was done in the South.

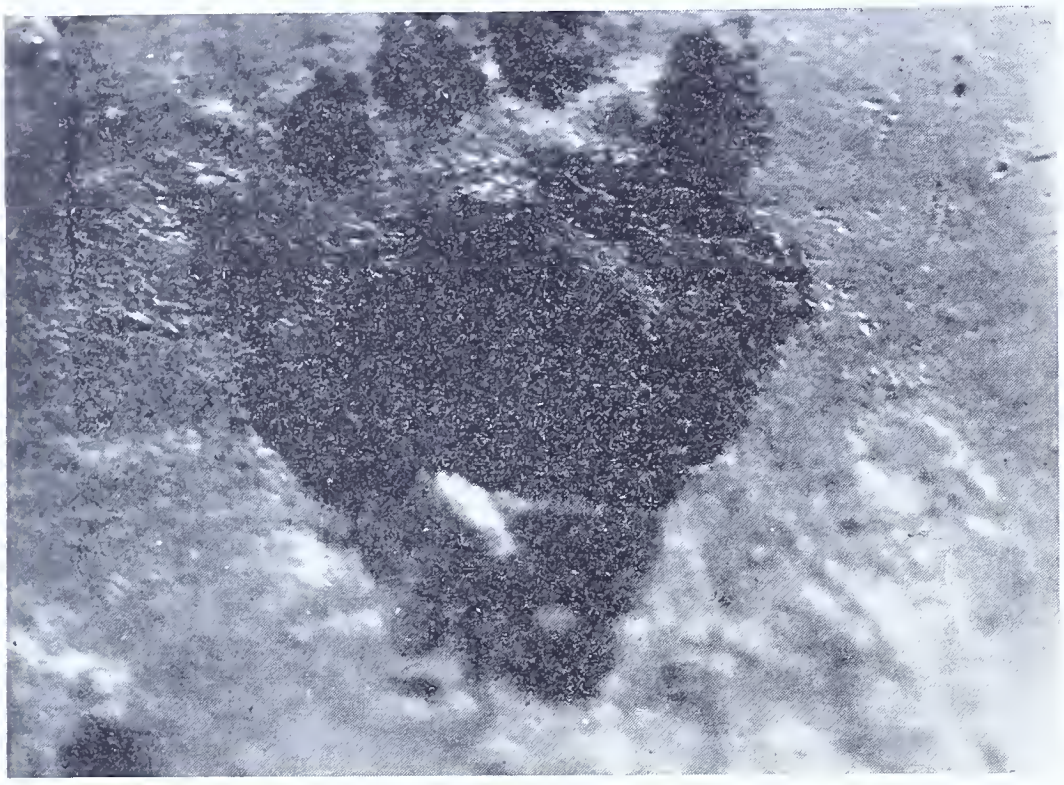
Notable among the resulting publications was "A Biological Survey of Alabama", "Birds of Alabama", "Birds of Arkansas", "Florida Bird Life".

Eight numbers in the famous North American Fauna series of the Federal Government were also contributed by Mr. Howell. These publications deal with two genera of skunks, the harvest mice, flying squirrels, pikas, chipmunks, and the ground squirrels. "A Revision of the American Arctic Hares," was published in the Journal of Mammalogy.

At the time of his death, Mr. Howell was working on a revision of the classification of red squirrels, and on accounts of the birds of Georgia, the mammals of Florida, and the mammals of Mount Mitchell, N. C.

The above photo is of great interest because it shows three of the country's outstanding conservationists. It was taken about 35 years ago and depicts, left to right, John M. Phillips, former President of the Pa. Game Commission who owns the photo, Dr. Wm. T. Hornaday, and Uncle "Dan" Beard, founder of the Boy Scouts of America.

CURRENT TOPICS



Any persons doubting the size of the bears in Bradford County should visit the garage at the refuge headquarters of Game Protector Walter G. Zellers, Leroy, Pa. Mr. Zellers recently had a cement floor placed in the building only to have a large bear make a visit during the night. The animal probably was attracted by the odor of fertilizer stored in the building. At any rate its numerous tracks in the cement are telltale evidences of its nightly pilgrimage.

On June 30, 1940 a new Federal agency, the Fish and Wildlife Service, became a legal entity operating in every State in the Union, Alaska and Territorial Possession, and in inland waters and the oceans surrounding the United States.

Created with the approval of the Congress under the President's reorganization plan, the new agency is a part of the Department of the Interior. It consolidated the work of the old Bureau of Biological Survey and the Bureau of Fisheries, which ceased to exist.

Creation of the new agency marks another important step in consolidating Federal conservation activities in the Department of the Interior. The Bureau of Biological Survey formerly was in the Department of Agriculture and the Bureau of Fisheries was formerly in the Department of Commerce. Both were transferred to the Department of the Interior under reorganization plans last year. The new Fish and Wildlife Service comes into being at this time as the result of expiration of 60 days since the President sent Reorganization Plan No. III creating the consolidated agency to the Congress.

Dr. Ira N. Gabrielson, formerly Chief of the Biological Survey, became the director of the new Service. Charles E. Jackson, Acting Commissioner of Fisheries, and W. C. Henderson, Associate Chief of the Biological Survey, are the Assistant Directors. Nearly 2,000 Federal workers throughout the country constitute the staff of the consolidated agency.

In a newspaper appeal several weeks ago John M. Phillips, pioneer conservationist and former member of the Game Commission, proposed the mobilization of the Buckshot Brigade of Allegheny County for the purpose of protecting industrial interests against the depredations of saboteurs. The original organization, which was disbanded after the close of the last World War, consisted of approximately 3,000 loyal sportsmen. Each man furnished his own equipment, including shotgun or rifle, and in order to give the organization legal standing the county sheriff deputized each member. The men enlisted for the duration of the war, spending from one to three evenings each week in drilling and also giving service to other war aid work. Companies were organized in Pittsburgh and about 13 additional cities and boroughs surrounding Pittsburgh. In speaking of the more than a half million hunters in the Commonwealth, Mr. Phillips said, "if these men who are expert marksmen and who are capable of taking care of themselves outdoors were organized into companies along with former war veterans in the manner of the Old Buckshot Brigade they would be ready to suppress sabotage and protect the nation if war comes."

THE MAIL BAG

"Though you instructed me not to fill out my original Game Report, yet I feel I should accompany the detached post-card with some sort of letter of apology.

"I have been so enthusiastic about the fine work of the Commission, have been so willing to cooperate, was very meticulous about getting in reports from the other four members of my family, that I am very much ashamed of this complete oversight of mine! Your offer of leniency is appreciated by me, as it must be by other careless people such as myself.

"So this letter is to endorse very wholeheartedly everything the Game Commission does and to encourage you for future good work—and again to regret my negligence."—G. P. Millington, Philadelphia.

FEDERAL AID PROJECTS

Two upland game bird refuges purchased under Federal Aid projects will be developed by the Idaho Fish and Game Commission.

On the John Mitchell Ranch in Crockett County, Texas, there are approximately 2500 collared peccaries. The animals have been protected for a number of years, and have increased to such an extent that their range is being damaged. Their favorite food, lecheguillo, is disappearing and they are turning to foods necessary for livestock. Other ranches in Texas are well suited to the wild pigs and want some for seed stock, as they are a favorite game animal.

The Game, Fish and Oyster Commission has submitted a project to trap surplus animals on the John Mitchell Ranch and transport them to suitable areas. This project will mark a new venture in wildlife management, as javelinas, as the peccary is termed in Texas, have not hitherto been trapped in large numbers.

The Texas Game, Fish and Oyster Commission also proposes a restoration plan for the desert bighorn. The first step in the plan has been submitted as a project to investigate certain phases of the habits of the sheep and to make an inventory of lands suitable for refuges.

The Indiana Fish and Game Department is planning a statewide wildlife survey and demonstration project. The project provides facilities for obtaining information as to distribution of wildlife in the State and for determining the limiting factors and remedial procedures needed to restore satisfactory wildlife conditions.

The California Fish and Game Commission established a project to survey the fur resources of the State.

Resolutions of the 1940-41 Hunting and Trapping Seasons

(Continued from Page 11)

of Section 505 of Article V of the Act aforesaid; and the Executive Director of the Commission is hereby authorized and directed to certify these rules and regulations as and for the act of the Pennsylvania Game Commission.

I hereby certify that the above be a full, true and correct copy of the resolutions establishing rules and regulations governing open seasons and bag limits for hunting, taking and killing certain game birds, game animals, and fur-bearing animals from October 1, 1940 to September 30, 1941, inclusive, as adopted by the Pennsylvania Game Commission at a meeting held July 11, 1940; and that notice of such action pertaining to seasons, bag limits, etc., as it affects each county of the Commonwealth has been or will be duly published in two newspapers (where there are that many) of general circulation in each county of the Commonwealth, one time each week for two consecutive weeks, as required by the Act therein cited.

SETH GORDON, Executive Director,
Pennsylvania Game Commission.

CURRENT TOPICS

A CRITICISM

The editor was criticized for using the photograph of the boys with protected birds on Page 13 of the July issue. He accepts this criticism for it is well deserved.

It was thoughtlessness, inspired subconsciously by a sincere desire to show what a great part education has played in the conservation of wildlife during the past ten or fifteen years. That the photograph might reflect criticism never entered his mind at the moment.

Certainly it was not used for the purpose of making an example of any individual or individuals. There are very few boys who did not, at some time or another in their lives, use the little old BB gun or .22 rifle too promiscuously; and as the lads herein referred to, most of them have undoubtedly grown into splendid manhood, well liked and respected in their communities, in many cases even members, sometimes the staunchest members, of sportsmen's organizations.

Ever since the Game News has been published both the Commission as well as the editor have tried to avoid, except in the most unusual cases, even using names of those who violate the law.

The editor well remembers his early day enthusiasm with a rifle as well as the punishment which was meted out to him for using it for the same purpose. The criticism if felt even more keenly because of that fact.

NOTES FROM THE FIELD

"Due to the large amount of the locusts in this section crows are a minus quantity in the fields. Very rarely are you able to see any except in the wooded sections. This should be a help to all field nesting birds."—Game Protector Ross G. Metz, Huntingdon County.

"Our forests are full of 17 year locusts, and the turkeys are feeding on them."—Game Protector Thos. A. Mosier, Centre County.

"I was compelled to remove six very small rabbits from the back yard of Oliver Meserly, 810 Pennsylvania Avenue, York, on June 6, 1940 because they were in the flower bed not more than six feet from the back porch. I took the young ones home, set several box trops near the nest, and caught the mother rabbit that night. I placed them all in a nest in a raccoon cage, and the mother cared for them for several weeks until they could care for themselves; then I released all six and the mother, and they are all doing nicely."—Game Protector A. Clinton Ganster, York County.

"I killed a rattlesnake in Ravers Gap this week that had a half grown rabbit in it. The snake measured 7¼ inches around where the rabbit lay."—Game Protector Roland Turley, Bradford County.

"Picked up a Canada goose with a broken wing on the Youngiogheny River, June 18. Bird is wearing band number FS39, Jack Miner Sanctuary, Kingsville, Ontario."—Game Protector Nicholas M. Ruha, Somerset County.

"Hawks in this section are conspicuous by their absence; not as many as in former seasons. The Buzzards that were on and in the vicinity of S. G. L. No. 143 are not showing up as they were in former years. So far I saw only two. Last year I would see as many as 30 in a flock."—Game Protector John A. Hopkins, Warren County.

Elaborate plans are being made to entertain farmers of the nation at the World's Fair during the week of August 12 to August 18. Because many of our readers are farmers and landowners we take pleasure in carrying this announcement. We understand the program for the entire week has been made up and can be secured by addressing H. D. Gilson, Director of the Fair.

"On June 13 when I was with Leon Keiser and Orrie Smith checking a wild turkey propagating area in Fulton County, a large blacksnake was killed that had swallowed 5 wild turkey eggs. Moving pictures were obtained showing both the snake and the eggs."

"On June 24 Roland Turley killed a rattlesnake which had eaten a small rabbit. I saw this snake soon after he had killed it. This incident took place on G. L. No. 73, Bedford County."

"During the last week of June, Elmer Alexander killed a large blacksnake near Refuge 509-A, Huntingdon County. When this snake was cut open, he discovered five small wild turkey poults. I saw this snake and the turkey poults when I contacted Alexander a few days later. These incidents are interesting since they show the loss of wildlife due to depredations of the various snakes.—John B. Sedam, Game Technician, Huntingdon County.

THE DR. JOSEPH KALBFUS MEMORIAL

(Continued from Page 5)

R. Kulp, Reading, and F. D. McCue, Oil City.

The Sub-Committee in Charge of Arrangements for the plaque and its unveiling included M. C. Merritts, Altoona; A. J. Hanes, St. Marys, and Rev. Darlington R. Kulp, Reading.

Clubs and individuals contributed generously to the fund and in 1937 a bill was sponsored by Representatives William D. Imbrie from Butler County and Harry L. Shumacker, of Erie County, for the placement of a plaque in the Corridor of the Capitol. The bill was signed by Governor George H. Earle, April 13, 1937.

And so comes to a close a final tribute to a great man. It is easy here to recount and pay tribute to the noble efforts and sacrifices of this grand old trail blazer, but nothing we can say or do will fittingly honor his memory. The early road to conservation was full of obstacles, some of them virtually insurmountable, but with his good judgment, splendid courage, tireless energy and the unfailing support of his superiors—the Members of the Pennsylvania Game Commission—Dr. Kalbfus surmounted all of them and attained renowned success.

Plaque in honor of Dr. Kalbfus being viewed by (left to right): Hon. John M. Phillips, Pittsburgh, Chairman at the unveiling ceremonies; and relatives of Dr. Kalbfus as follows: Hugo Frear, grandson; Mrs. Helen Kalbfus Frear, daughter; Admiral E. C. Kalbfus, son; and Mary Louise Frear, granddaughter, who unveiled the plaque.

Oscar H. Krock, of Alburtis, Pa., is shown above with his coonhound, Sun Rise, which recently won final tree honors over an entry of 109 dogs, at a field trial conducted by the Beaver Creek Field Trial Club near Bernville. Sun Rise was the first Berks County dog to win from such a large field which contained dogs from several eastern states.

Two of the biggest trials ever held with led animals in this part of the country were held June 9 and 23. Both events were conducted under the supervision of Game Protector Joseph N. Leindecker of Wyomissing, and our own Field Marshal, Leon Grundy, of Fleetwood.

The trial on June 9 was held three miles east of Reading, near Weber's Hotel at which a large gallery watched 92 dogs perform.

The trial on June 23 was held near Bernville with 109 dogs entered and an even larger gallery present. A registered English dog, owned by Oscar H. Krock, of Alburtis R. 1, Pa., took tree honors over some of the best dogs in the east. All money derived from the events will be used for restocking and propagating different kinds of game. This organization is rapidly spreading over the eastern part of the state due to its good sportsmanship and the friendly manner in which it operates.

Anybody wishing to get on the Association's mailing list should write to the Secretary, Elmer Bortz, Fleetwood R. 1, Pa.

The Montour County Fish and Game Conservation Club has designed a game bird flushing apparatus which has proved very satisfactory, and which is being used extensively in that section during this summer's mowing season. During the month of June the Club made up and had in use by cooperating farmers, 27 of their type flushing bars.

Joseph Alcorn, Secretary, Snydervil'e Rod and Gun Club, advises that about 50% of the club members subscribe to the GAME NEWS and like it very much.

The Jefferson County Sportsmen's Association will hold its annual picnic on August 14 at the Game Commission's Field Officers Training School near Brockway. Trap shooting, rifle shooting, plug and fly casting will constitute the contests, and it is to be an all day affair. Everybody is invited to attend.

The Eighth Annual A-K-C Sanctioned Fall Field Trials will be held by the Stein's Hollow Beagle Club, on its Game Refuge at Lower Mill Creek between Saint Clair and Port Carbon, two miles east of Pottsville, Pa., on September 1 and 2.

Running Order—Sunday September First, 13 inch dogs and bitches (combined). Monday September Second, 15 inch dogs and bitches (combined) Drawing at 8:30 A. M. each morning.

An entry fee $2.00 Ribbons will be awarded to all placed hounds, with fifty percent of entry fees in each class to be divided 50-30-20. Headquarters will be at the Hotel Davis, East Market Street, Pottsville. The Judges will be George K. Brands, of Stroudsburg, and Gene Stebnitsky, of Sandy Run.

The Running Grounds have been greatly improved, all coal holes have been closed on the Game Refuge, and there are plenty of rabbits. For further information write Frank J. Wapinsky, 147 N. Second Street, Saint Clair.

Laurence (Larry) Bruce Ashcom, one of Johnstown's best-known newspapermen and an ardent sportsman, died unexpectedly of a heart attack at his home on June 29. The veteran writer, a member of The Tribune staff since 1920 and for 15 years its city editor, was in poor health in recent years.

His particular outdoor love was fishing. He spent many of his leisure hours along the streams of Pennsylvania and was widely known and respected among sportsmen.

In recent years his most popular newspaper effort was a series of articles appearing in The Tribune under the caption, "The Old Angler."

"The Old Angler" on many occasions disagreed with such groups as the Board of Fish Commissioners and the Pennsylvania Game Commission in his column comments, but at all times he was interested in advancement of the pleasures of the average sportsman.

The veteran writer was active for many years in the Johnstown Sportsmen's Association and was one of the organizers of the old Johnstown Rod and Gun Club.

Berks County Chapter of the Izaak Walton League of America announces its Eighth Annual Sportsmen's Field Day to be held Aug. 25, 1940 on the grounds of the Cedar Top Gun Club, near Shillington, Pa. Many events are scheduled for the day with appropriate prizes for the winners.

$50.00 REWARD

Springer Spaniel, black and white male, 40 lbs., dark brown eyes, soft hair. Will sit up and beg. Friendly. Reward of $50 offered by J. B. Semple, Sewickley, Pa. Phone 642.

CROW HUNTERS COMPETE

Held under unfavorable weather conditions, the American Crow Hunters' Association sixth annual crow hunt staged at Kenton, O., June 28-29, was nevertheless the most successful and enthusiastic meet that has yet been put on by the organization which has been conducting actual field crow killing for the past five years.

Each year the winner is awarded the custody of a beautiful and emblematic trophy made possible by the generous sportsmanship of the late Ed Rausenberger of Circleville, Ohio.

The entry list was represented by shooters from all over Ohio and some from neighboring States, including John Mock, Outdoor Writer for the Pittsburgh Press. Every contestant proved to be a generous and courteous sportsman which is attested by the fact that the City of Kenton regretted that they could not return to their city and county again next year for the big event.

The trophy and honors were won by P. O. Harbage, of West Jefferson, Ohio, with a total kill of 16 crows in two hours time. The runner-up was Pete Ramge of Hardian County, last year's winner with 15 to his credit. Others came along with 11 and 10 and on down to 2, with a total of 88 crows killed by the 17 contestants. With more favorable weather conditions, no doubt the kill would have been much greater, as the high wind blowing at the time coupled with cloudy skies was far from ideal for crow shooting.

One of the highlights of the shoot was the count of 10, brought in by George Clevenger, a real one-gallus hunter from Lancaster, Ohio. Mr. Clevenger hunts with a single barrel and does his calling with his own voice. In recognition of the type of sportsmanship shown by Mr. Clevenger, the gathering voted almost unanimously to hold the 1941 convention at Lancaster.

The sport of crow hunting is fast taking hold of the shooting public, many hunters now saying that they get a greater kick out of hunting crows than they do pheasants or ducks; and when it is considered that with every crow killed you are helping conservation by reducing his number when he becomes too plentiful, you are missing something in not buying a hunting license, a crow caller, and joining the American Crow Hunters' Association, the annual dues of which are $1.00.—Grover Hipp, Grover Hill, Ohio.

The Keystone Setter and Pointer Club, Reading, Pa., will hold its Seventh Annual Fall "Bird Dog Trials" Saturday and Sunday, September 21 and 22. Trials will be conducted on the Keystone Club grounds "Sports Acres", one mile west of West Leesport. It is expected Dr. Sherman Ames, popular bird dog breeder and trainer of Easton, will officiate. Open Derby and Open Shooting Dog stakes will be run on Saturday, and Open All Age will be contested on Sunday. Beautiful trophies and ribbons will be awarded the first three places in each event. Drawings will be made at the Berkshire Hotel, Reading, at 8:30 on the night preceding the respective events. Anyone interested, please contact J. Elwood Hollenbach, Secretary, 837 Penn Avenue, Wyomissing, Pa., or phone Reading 4-5467.

BLAIR COUNTY ASSOCIATION TO CELEBRATE TWENTY-FIFTH ANNIVERSARY

On August 31, 1940, the Blair County Game, Fish and Forestry Association will celebrate the twenty-fifth anniversary with appropriate ceremonies at its Chief Logan Lodge. The lodge, a beautiful building, and club grounds are located at the head of Riggles Gap, at the foot of the Allegheny Mountains. The grounds comprise a tract of 428 acres, 100 acres of which have been wired and established as a State Game Refuge and through which flows one of the finest streams in Blair County.

The recreation facilities of the club house, which is constructed entirely of logs and native stones taken from the tract, are many. There is an unobtsructed auditorium and dance hall 60x25 feet, with a recreation room of similar dimensions on the second floor with a balcony facing the southeast which provides a very pretentious view of the surrounding woodlands. It has a modern kitchen 20x24 feet with equipment to serve 100 people. The caretaker's quarters are on the second floor.

The club has one of the most modernly equipped rifle and pistol ranges, with protected target pit on 100-yard range with telephone service from shooters quarters to the pit; also an excellent clay-bird trap field with a fine building completely surround by a flagstone porch.

Ample picnic facilities include tables and outside fireplaces for the comfort and pleasures of the members. There are also horseshoe, quoit and volley ball courts, and an archery range.

An average of 150 persons are entertained at the Lodge each Saturday evening with dancing and games. Banquets are provided by appointment by various organizations. A banquet will be served on Thursday evening, July 31 for the benefit of the War Relief Fund of the Red Cross.

The Annual Picnic of the Association will be held on August 31 in connection with the 25th anniversary celebration.

The association has been very active the past year in conservation and reforestration work, having planted many thousands of trees to provide food and cover for wildlife as well as to prevent soil erosion.

Considerable experimenting is being done with Japanese and Chinese chestnuts and other trees of foreign origin.

An extensive program of landscaping and beautifying the grounds has been started.

"At about 12:05 A. M. E.S.T., June 24th, I received a phone message from the City Police that a live injured eagle was lying in the middle of one of the main streets in the northern end of Lancaster. When I arrived at the scene a few minutes later I discovered that the reported bird was really an eagle, although I was astounded at such an unusual occurrence.

"It was an immature Bald Eagle, over a year old but less than 3½ years of age because it did not have the white head and tail and yellow eyes. The bird did not possess the use of its wings and I suppose the injury resulted because it became confused by the city lights and flew into overhead wires or some building. Some person in the audience advanced the theory that possibly the bird had been struck by an aeroplane which had passed over that section of Lancaster about the time the eagle was first noticed on the street.

"With the help of some bystanders and the City Police the bird was captured without further incident and I delivered it to the Hershey Zoo to be properly cared for until it regains its full strength. At this date (July 7, 1940) I understand it will be ready for liberation in about a month and in that event I shall release it near the Eagle Sanctuary which is located on Mt. Johnson's Island on the Susquehanna River close to Fishing Creek. Needless to say, this is the first time in my ten years' experience as District Game Protector that I have ever heard of an eagle being seen **in** or **over** the city of Lancaster."—Game Protector J. M. Haverstick, Lancaster County.

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PENNSYLVANIA GAME COMMISSION
HARRISBURG, PENNA.

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SOIL CONSERVATION DISTRICTS

Continued from Page 7

Fig. 5—Soil Conservation Practices Benefit Wildlife—Many of the measures used to conserve soil also improve wildlife habitat. This picture shows a diversion terrace used to carry excessive water from the crop fields. Its permanent vegetation is an excellent nesting cover for game and song birds.

program of wildlife management in conjunction with other conservation work. This organization should provide a means for economically facilitating game cooperatives.

For the sportsman's organization, local sportsmen's clubs and their county and state federations should serve admirably. However, I believe that they must be strengthened far beyond their present level of activity if they are actively and permanently to undertake this cooperative work. The very opportunity for this work should help to stimulate this increased strength. Farmer organizations, with a few local exceptions have not been in a position to handle the needed cooperative efforts in conservation work. The United States Department of Agriculture, in its work with the conservation of the soil and its resources, recognized the need for some type of farmer organization that would function democratically to solve the common conservation problems of a locality. Legislation enacted by a majority of states within the last three years may go a long way to meet this need. It is the soil conservation district that may well prove to be the missing link in the landowner-sportsman relationship problem.

What is a soil conservation district, how is it organized, how will it help in this wildlife management problem? Well, I think you may gain a better understanding of it if we call it simply a conservation district; for while the soil is the basic resource to be conserved, the resources derived from the soil—farm crops, forests, water, and wildlife—are equally important in the conservation objectives. They are the beneficiaries of the conservation of the soil. So it is not only natural but essential that these districts definitely plan for the care of all of these resources.

The philisophy behind the soil conservation district movement is to place the responsibility for soil conservation and good land use squarely on the shoulders of local people—the people who operate the land. The district is an agency through which farmers may cooperate with each other and with public agencies in the conservation of their natural resources. Through it they may exercise their initiative and take their full share of responsibility for the solution of their common conservation problems. The districts are owners are fully aware of their own prob- selves and district policies are established by them. This is only possible when the landowners are fully aware of their own problems and are informed as to the methods and techniques of the best solution. That is where public agencies come in—any local, State or Federal agencies that are in a position to furnish the district with professional guidance and help. When the district faces wildlife conservation problems, it is obvious that it should turn to the State wildlife agency for help; and, it is equally apparent that the state can operate more efficiently on farm game work through the cooperation of a conservation organization such as the district.

Districts are generally political subdivisions of the state and as such require state enabling legislation. Experience by the states has indicated that the logical unit for a district is a watershed or group of watersheds, but they have usually found it expedient to define the boundaries by roads, streams, and existing political lines to approximate the watershed owing to the legal difficulties in defining a watershed boundary. Districts formed so far include from something less than one hundred thousand acres to more than a million acres each.

Let's take a typical districts law and see how districts may be organized under it. The act probably provides for the establishment of a state soil conservation committee which may receive petitions for district organization. The petition should contain at least 25 names of landowners or occupiers. Then the state committee holds open hearings in the proposed district area to sound out public sentiment and to answer questions that arise. If there appears to be need for a district and adequate interest in its formation, the committee then defines the boundaries and calls a referendum. If the vote is favorable, the committee may then appoint two directors or supervisors for the district. These appointed supervisors file an applica-

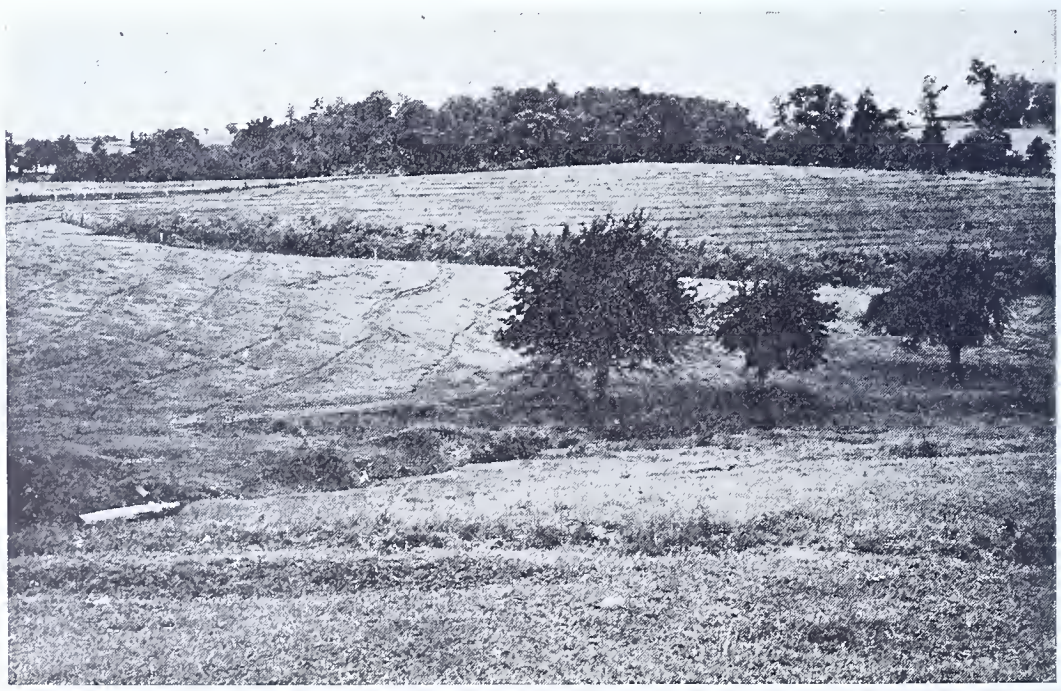

Fig. 6—Conservation Requires Cooperative Action—Two gullies appear in this picture, the one in the foreground bare and eroding, the one in the back well vegetated. The control of erosion and establishment of good wildlife cover on the second one was accomplished through planting of trees and shrubs accompanied by fencing. Most farmers need help to accomplish this work. The Soil Conservation District can pool all available resources to give him that help.

tion for a certificate of organization with the secretary of State. When this certificate is issued the district comes into being. Three more supervisors are then chosen at an election.

The board of five supervisors is the governing body of the district. The supervisors' first job is to study the conservation problems of the district and to formulate a program of action. Based largely on soil conservation and the control of erosion and water run-off, this program may include many conservation objectives. Flood control, improved pastures, woodland management, and wildlife management are some of the more commonly expressed objectives in addition to basic soil conservation. On the basis of this program the district may request assistance from any public agencies that are in a position to help them with technical guidance, loan of equipment, or the furnishing of labor and materials. They may ask the state extension service to assist with the educational needs; the State college may be asked for guidance on fertilizer and seeding requirements and similar problems. The Soil Conservation Service is usually requested to furnish technicians to make farm plans embodying conservation needs. The state and county highway commissioners, the state forestry agency, and the state wildlife agency are others that may be called upon for assistance. The district may seek cooperation from other organized groups in the vicinity, such as fertilizer associations, chambers of commerce, cooperative marketing agencies, and sportsmen's clubs. In working out the landowner-sportsman relationships problem, the district would logically turn to the state conservation department and the local county federation of sportsmen's clubs.

In most cases a written document of cooperation is drafted to cover the relations of the district with each cooperating agency. Such a document is required by some organizations, such as the United States Department of Agriculture, in order that public funds may be utilized.

With the objectives of the district set forth in its program and with cooperative arrangements completed with various agencies, the district supervisors draw up their work plan. This sets forth in detail what is to be done, who will cooperate in doing it, and when it will be done. As a practical matter, the work plan is usually drafted at the same time cooperation with the various agencies is arranged, and representatives of the interested agencies work with the supervisors in drafting it.

This work plan covers in detail all recommended actions, techniques, and plans. For example, it may be specified that a certain type of soil on slopes of over 3 per cent should be cropped not more intensively than in a four-year rotation of tilled crop, small grain, and two years of hay, in a layout of contour-strip-cropping with the strips not exceding 100 feet in width. Another example might be—in fact, almost always is—that woodlands shall be protected from fire and grazing. There is no limit to the extent to which practical wildlife management may be included in the work plan. Woodland plantations, shrub plantings, swamp and pond development, herbaceous wildlife field border plantings, hedge plantings, food patches, winter feeding—all may find their proper place in this plan for conservation action. Arrangements for landowner-sportsman-state cooperation are thus made simple and logical. Game management no longer has to stand alone on its own legs, but becomes a logical part of a broader conservation job, an action which is so fundamental to the farmers' future well being that the permanency of the whole is firmly established. By coordinating all phases of land conservation, each is assured its place—another example of the old adage, "United we stand, divided we fall."

I may add that sportsman groups are playing an important part in the organization of districts. I have said that districts are organized and run by the farmers. That is true, but the leadership in guiding the formation of a district may come from any source interested in conservation. I know of one case where a chamber of commerce is the guiding influence. There are a number of cases where wildlife interests have furnished this leadership. In one of these, an Izaak Walton League Chapter in Maryland has helped with the organization of two districts, both now operating. The opportunity is there for pioneering service in advancing the cause of practical conservation on the land.

With a district formed, the opportunity for cooperative wildlife work, both in the management of the land itself and in landowner-sportsman relationships, is unlimited. It is the first time that the various interests in the conservation field have had a concrete opportunity to function together in a unified program. The folks interested in highway roadside beautification, those interested in cooperative woodland management, cities concerned with flood control, sportsmen interested in game, and nature lovers interested in wild animals and plants, these and others as well as the farmer may coordinate their interests in effecting conservation of the resources of the land.

Thirty-six states have enacted soil conservation district laws in the last three years. There are more than 125 million acres now included in districts, and the total is growing rapidly.

The sportsmen, through their National, State, and local federations, should be fully informed on these new developments in order that they may play their proper part in furthering conseravtion of our farmlands. While I recognize the difficulty of adequately presenting such a big subject to you in so short a time, I hope that you have at least received enough information to whet your appetite for more.

SPORTSMEN! LOOK AHEAD!!

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who needs help to see and understand what to offer the pupils. For example, a child says he thinks it is perfectly all right to burn brush piles, because his father, a farmer, does it and he ought to know what he is doing. At first the teacher cannot make him understand that the home of the wildlife on his farm is destroyed. Finally, the teacher asks him if he has a pet. He has a gold fish. The teacher asks him to throw some of the ashes in the bowl with the gold fish. He says, "No, it will kill the gold fish". When the teacher points out to the child that the rain can wash such ashes into the stream, thus polluting the water and killing fish, he can understand that burning brush piles near a stream is a bad idea. Thus he is so convinced that he will urge his father to discontinue the practice of burning brush plies on his farm.

The teachers in the classes I had the privilege of attending were studying the official bulletins of Tennessee and other states, including Pennsylvania. The recommendations made by these teachers are considered for future publications. In turn the future publications should be of more practical use to teachers and pupils respectively. It is noted that teacher training is of prime importance. Textbooks and supplementary materials are scarce and good materials are not available. Stress is placed upon content rather than method. It is believed teachers must be taught HOW to teach conservation rather than conservation principles.

Other valuable points of contact are being developed with great possibilities, such as creating interest and working with the 4-H clubs, the Boy Scouts and the Future Farmers of America. Youth craves activity, and conservation is a worthwhile activity for a future good citizen.

The Tennessee Conservation Department spends much time and effort in preparing educational materials, such as conservation posters, motion pictures, bulletins and other curriculum materials. To adequately and efficiently prepare these all important educational materials for the schools of Pennsylvania some sort of clearing house must be established between our various departments to facilitate the work, so that the teachers and pupils may benefit to the greatest degree with the least tax upon our departments. The sportsmen of Pennsylvania must insist on these progressive steps to be taken and realize that every dollar spent toward conservation education is an investment on the natural resources and the human resources of Pennsylvania today and in the future.

"On June 23 I located a Sparrow Hawk's nest with young in it. The nest was in the boxing at the edge of the Willow Grove School House roof. The following day I went back to make a few observations. Using my binoculars I could easily see what type of food was being carried to the young. In three hours one trip was made by each parent. Each of them brought a field mouse. The following day in the P. M. I visited this place and found that the young had flown. My presence there no doubt prompted the old birds to hurry up their departure."—Game Protector W. W. Britton, Franklin County.

"Blacksnakes seem to be more plentiful this year. I have never seen as many or as many big ones. The boys on the WPA Project at Game Lands No. 95 killed a big blacksnake recently that had seven grouse eggs inside of it."—Game Protector Troy C. Burns, Butler County.

Over Half a Century of Wildlife History

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Frank G. Ashbrook (right) in charge of Biological Survey's section of fur resources, and his assistant, Charles E. Kellogg comparing pelts produced under various experimental methods in breeding and managing fur animals.

of the Biological Survey have been empowered to apprehend violators of Federal hunting regulations. The acts enable the United States game management agents to protect wildlife for both Federal and State agencies. Sixty-six agents are assigned throughout the country.

The passage of these acts has enabled the Biological Survey to reduce the shooting of migratory waterfowl and to create refuges for these birds. While other factors have to some extent aided in the recovery of waterfowl populations since 1934 the principal cause of the increase has been the reduction of shooting in the United States.

Federal Aid Act Helps States

Another important act of Congress affecting wildlife conservation was passed in 1937 when the Federal Aid to Wildlife Restoration, or the Pittman-Robertson Act, approved the appropriation of sums to be used by the States for the development of their wildlife resources. Appropriations cannot exceed the amounts collected on the 10 percent excise tax on sporting arms and ammunition. Last year the excise tax amounted to some $3,000,000.

Since the Federal Aid Act was passed, more than 260 wildlife conservation projects in 43 States have been approved by the Biological Survey, which administers the Federal funds for the Secretary of the Interior. On each project, the Federal Government bears 75 percent of the costs and the State 25 percent.

No attempt is made to influence the type of conservation work the various State game commissions may wish to do. Projects submitted for approval are checked only to see that they are feasible. The Survey offers advice to the game commissions only when it is requested.

In 1938, Congress allotted $1,000,000 for Federal Aid work, and in 1939 it allotted $1,500,000 and the appropriation act for 1941 carries $2,500,000 for this purpose.

The money is apportioned to the various States on the basis of the acreage of the State and the number of hunting license holders it has.

Cooperative Research Units Established

In 1935, another important development in wildlife conservation began with the establishment of cooperative wildlife research units. These units, 10 in all, are located throughout the country so that as a group the units can study all types of wildlife in various environments. Sponsored and financially supported by State game commissions, land-grant colleges, the American Wildlife Institute, and the Biological Survey, the units emphasized research and practical phases of wildlife management.

Cooperative units study the status of various forms of wildlife, seek means to improve conditions for wildlife in the States, and attempt to devise practical management techniques that may be adopted to maintain desirable animal populations.

Units are now located in Alabama, Iowa, Texas, Virginia, Maine, Utah, Ohio, Oregon, Missouri, and Pennsylvania. Eight of the units are now in their fifth year, while Missouri began in 1937 and Pennsylvania in 1938.

Since 1935, more than 35 projects have been completed, and about 375 manuscripts dealing with various management phases have been published.

Duck Stamps Help Refuge System

With the passage of the Migratory Bird Hunting Stamp Act in 1934, all migratory bird hunters more than 16 years old are required to purchase a "duck stamp" each year. The duck stamp, which sells for $1, is about the size of a special delivery stamp and is sold at all first and second-class post offices and certain third-class post offices. Ninety percent of the money received from the stamps is used for the acquisition and development of waterfowl refuges; 10 percent is used for administrative purposes—to enforce the law, to print and distribute the stamps, and to print posters announcing regulations.

Since the duck stamp was first inaugurated, the stamp sales each year have been as follows: 635,001 (1934); 448,204 (1935); 603,623 (1936); 783,039 (1937); and 1,002,715 (1938). More than 1,000,000 stamps were sold in 1939, but complete figures are not yet available.

In Alaska, the Biological Survey conducts research on wildlife problems and maintains refuges. Its other functions are handled through its operating agency, the Alaska Game Commission. Eleven wildlife agents headed by a repreesntative of the Biological Survey, who also acts as the Commission's Executive Secretary, enforce the hunting and trapping regulations, study the status of the various forms of wildlife, and take other measures to maintain adequate populations of all species and prevent the extirpation or extermination of any form.

Name Changes, Work Continues

Though the Biological Survey is consolidated with the Bureau of Fisheries in the Fish and Wildlife Service, Dr. Ira N. Gabrielson, newly appointed director of the Service,

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What One School is Doing for Conservation

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First Aid in the Woods—First aid in the field is deemed a necessity by every sportsman. Every member is instructed in the modern and scientific method for the care of injuries caused by accident (especially during the hunting season). All of the boys are made to realize that many a life may be saved by this valuable knowledge.

Clothing—Proper clothing is just as essential to the sportsman as good firearms. Each member is given complete information as to what type of clothing is best suited for different weather conditions. During the big game season the wearing of plenty of red is advised.

Hunting Season—Upland Game—This year during the small game season 105 members hunted. These 105 members killed 523 rabbits, 100 birds, and 247 squirrels. It is interesting to note that 55 boys used the .12 gauge shotgun, 39 used the .16 gauge, 9 used the .20 gauge, and only 2 used the .410. This indicates that the twelve gauge shotgun is the most popular firearm among the members.

During the big game season 35 boys participated; these nimrods killed 6 bucks and 5 does.

Trapping—Quite a number of the boys have their traps strung out during the trapping season. This season shows 94 muskrats, 75 skunks, 22 weasels, and 44 opposums to the credit of the youthful trappers.

Feeders and Shelters — During the cold winter months most of the members build a large number of game shelters. These shelters are visited by the boys at least once a week. Over ten tons of feed has been distributed during the past winter and approximately 150 shelters were constructed.

Predators—While visiting the shelters constant watch was kept for the tracks of predatory animals and a good many weasels were destroyed. This system insures life to a great many animals that might have otherwise been destroyed.

Removal of Game Animals—The junior sportsmen are constantly on the lookout for complaints of wildlife in gardens and other places where they are not welcome. These findings are reported to the local game warden, who sets traps and removes the animals to places where they are less obnoxious.

Animal Propagation—The club members manifest keen interest in the raising of ringneck pheasants and each year receive a supply of eggs and day-old chicks that are raised and eventually released under the supervision of the game protectors.

Taxidermy—Many of the boys are interested in preserving some of their choice specimens of killed game. During the hunting season instructions are given in taxidermy. Many of the boys schooled in the art of taxidermy have in their possession some excellent mounted specimens.

Annual Field Day—At the close of each school year the boys and their advisors hold the annual field day along the banks of the Allegheny River at Trunkeyville, Pa. The fifth annual field day was held this year on Friday, May 31st. Rifle contests, fishing contests, boating, and mushball were engaged in. Prizes were awarded for the largest legal fish caught and for the best rifle shot.

"Help Wildlife" is the official slogan of the club.

The club leaders are as follows: President, James Wagner; Vice President, Paul Shorts; Secretary, Clarence Zerres; Vice Secretary, Paul Vosburg; Sergeants-at-Arms, Paul Harrison and Alvin Cherry; Principal, E. F. Bitters; Superintendent, John H. Linton.

FOXY BUSINESS

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population and to analyze just why these areas are lacking in foxes. To date the largest known area of such nature lies in the vicinity of the city of Lancaster. Here intensive farming has depleted most of the cover, and foxes can't find suitable denning or hiding sites. Other foxless areas exist but are not as well described as the Lancaster County area.

After the heavily and lightly populated areas are described it will be necessary to follow the trends of fox populations. Will these areas remain stable, or will the fox populations flow onto them and off? Preliminary indications are that in many regions of the Commonwealth, fox populations move about a great deal. Just what causes these movements? What will be the effects on the populations of various methods of taking foxes? What most effective methods can be applied to reduce heavy concentrations? There are indeed many questions which need answering before we can manage foxes intelligently so that their harmful predation and their beneficial habits are in balance.

Food Habits and Diseases

Wildlife workers have given much time to the study of predation and have arrived at a major premise: namely, that VARIATIONS IN THE DAMAGE INFLICTED BY PREDATORS UPON GAME ARISE FROM LOCAL VARIATIONS IN THE DENSITY OF PREDATOR POPULATIONS, AND FROM DIFFERENCES IN FOOD HABITS OF THE VARIOUS PREDATORS. Therefore, in attacking the question of predation, it will be necessary (1) to study the variations in population density—as mentioned before—and to discover the factors determining the variations; and (2) to study food habits over a long period of time in specific localities. Some excellent food habits studies of the red and gray foxes have been made in other eastern States and it will be fitting to utilize these studies. At the same time, diet studies should be made in carefully selected localities throughout Pennsylvania. Herein, fox trappers and hunters might assist the Game Commission in its studies by submitting fox stomachs.

Occasionally foxes suffer from diseases and parasites which tend to reduce their populations. It is important to gather more data on fox diseases and parasites. Here again fox hunters and trappers might be of considerable assistance by reporting any unusual conditions existing among foxes.

Next month, we shall resume discussion of this very interesting topic and we shall summarize some of the findings made during the current fox survey.

NOTES FROM THE FIELD

A big black bear, evidently in search of higher ground, wended his way from no one knows where, across the Hite farm on the outskirts of Newry to the western slope of the Catfish ridge near Duncansville recently.

The big fellow was evidently following an old bear trail, since he kept going in a straight line, corn fields, potato patches, fences, flower gardens and proximity to houses being nothing but a place to go through to him.

At the home of Mrs. William Cooper just east of Newry, he went through the garden by the side of the house tramping things down as he went and Mrs. Cooper was apparently too much frightened to even order him out. The animal was also seen by Roger Thompson, Mrs. Showberger and a driver of a Long dairy truck, who came into close contact with the bear.

The bear went on out through the John Weyant farm and into the wooded section. Since bears are not in season, he was allowed to pursue his course unmolested and those who saw him looked on from a distance.

"A few days ago I received a complaint of a beaver in a man's well. I supposed it was a Woodchuck but upon investigating I found a beaver weighing approximately 30 pounds in the water 18 feet from the surface. With the help of Game Protector Turner I let down a rope with a snare on the end and succeeded in getting the beaver by the tail and brought him out unharmed. There is no stream nearer than two miles."—Game Protector Edward L. Shields, Elk County.

Over Half a Century of Wildlife History

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contemplates no change in the type of work to be done by the organization. Assistant Director W. C. Henderson, who will be directly responsible for the functions formerly assigned to the Biological Survey, was Associate Chief of the Biological Survey for 24 years. He expects to continue the work under his direction in the same general lines taken by the Survey for the past half century.

FOX HUNTING NOTES

« « By W. NEWBOLD ELY, M. F. H.

A very forward proving station is the Patuxent Research Refuge where hundreds of squirrels, raccoons, muskrats, opossums, foxes, minks, ferrets, rabbits, and game birds all thrive and multiply inside the seven foot high fence which runs around the Refuge in a solid span of thirteen miles. Only the minks and the ferrets are kept in pens and these are used as guinea pigs for scientists studying distemper and parasites.

There was a paragraph in an English paper recently about hunt servants wearing livery at pre-cub hunting exercise "to get young hounds used to scarlet coats." The trouble with this is that all hounds, young or old, are color blind, as are all dogs.

From the same side of the water Mr. James Fitzwilliam, the able Secretary of the British Field Sports Society, brings out that young evacuees from urban districts have had little or no chance to make contact with country life, and all that goes with it, including hunting and other sports. In fact, their impressions are probably anti-hunting impressions from the cheaper press. By having meets convenient to evacuation centers the children can accompany hounds to draw and by personal experience learn to appreciate it all.

The Philadelphia Bulletin had a most interesting article recently from which the following quotations should be of interest:

"The descendants of America's first fox hunters will be found galloping over hill and dale after the red, long-legged, long-winded, speedy 'Pennsylvania fox,' which is found nowhere else in this country, except in Maryland and Virginia. The Indians who lived in Penn's Woods said that this particular kind of fox was never seen before the coming of the Europeans.

"Mr. William Kerr, of Rose Tree, a septuagenarian, and Mr. Edward F. Beale, of Radnor, now in his eighties, are still active as hunters. Fox hunting is definitely profitable to the community. In the first place, a hunt club increases the value of neighboring real estate. Land near the various clubs, which could have been purchased for $50 an acre twenty-five years ago, now brings $1,000. Furthermore, as an industry, it maintains a great many people—veterinary surgeons, habit makers, saddlemakers, whipmakers, bootmakers, besides all the kennelmen, grooms, stablemen, and so forth. The thirteen recognized hunts in this part of the country each has an average of seventy-five hounds and two hundred horses. It costs a member $250 for a season from September 15 to March 25. A guest pays a 'capping fee' of $10 for one day's hunting. The village blacksmith, incidentally, doesn't stand around under spreading chestnut trees any more. He puts his forge and all his equipment into a truck and drives around to his customers. A few hunting men have their own forges at their stables, but this is unusual.

"Fox hunting in the United States is very different from what it is in England, where foxes are as plentiful as rabbits. Where the famous English hunts, the Quron, Belvoir, Cottesmore, Fernie, and others, always kill one or two foxes a day, Radnor does not kill more than ten or fifteen in a year."

"The pastime of following the hounds, or fox hunting, involves an annual expenditure of from $50,000,000 to $60,000,000 in Great Britain."

The staid London Times carries this ad. "The Wardog Gasproof Kennel" for $14.77 with this moving copy:

"Could you watch him die? Could you ever forgive yourself—could you ever forget his abject terror should the dreaded gas attacks come?

"Every lover of our dumb friends must face this horrible question. Here is the answer—the perfect gasproof kennel." The kennel has a glass door and fresh air is pumped in with a bellows arrangement.

The Missouri Game Commission so appreciates the fox that they have a new rule this year which brought forth this from Harry Ross in the Kansas City Journal:

"Boy, can the red foxes of Missouri sing that ditty—N'Yah! N'yah! You can't catch me . . ! — next year. For the Missouri Conservation Commission is going to put a new rule into effect January 1 which will allow you to chase foxes or 'coons all you want to, but Heaven help you if you happen to catch or kill the furry little critters at any time.

"Thomas Bagnell, county conservation officer says he doesn't expect to have any trouble making the human devotees of fox hunting understand the new code, but he hasn't yet figured out a way to get the point over to hound dogs.

"A good hound operates under the quaint conceit that if he can shag down a fox he can kill him. About the only out Bagnell can see is for that class of hunters who follow the Missouri system of fox hunting to change their whole procedure.

"The Missouri system is strictly a sport for an indolent man. The usual procedure is for a bunch of men to gather in a clearing, build a fire and, when a fox appears, turn the hounds loose to chase the fox.

"The hunters just sit around swapping yarns and smoking and 'cussing' and having a general good time. They follow the hounds by listening to the baying of the dogs.

" 'That's that there ol' Jennie dog out in front,' one lolling hunter will remark when a mournful wail is heard. 'She's not a bad hound, I got her offen a feller up in Smithville.'

"Under the new rule, this languid sport will become a nightmare unless the hunters all want to wind up in the county keester. They can build the fire if they want to, but presumably it won't be worth the bother. The sportsmen can't hang around much and stay out of jail.

"When the fox blows into the precinct, the hounds will set off in wild pursuit. After them, apparently, will go the hunters, galloping and wheezing away for their freedom.

"For if the dogs should just happen to forget about the conservation commission in the hot thrill of the chase and knock the little varmint off, the commission will take drastic steps against the owners who let it happen. Naturally, persons who ride to the hounds also will be under the same rules."

CHESTNUT TREES

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interest in the chestnut as a commercial proposition was being thoroughly aroused.

It is, then, strikingly apparent that a tree of so great potentialities should have received the attention and care which any other important fruit or timber tree instead of being left alone to regenerate naturally in competition with other forest growth. The loss of our native tree is a calamity but one not irreparable, for it is obvious that the cultivation of the chestnut will not be abandoned because of a temporary setback. The widespread admiration for it will easily assist us in predicting with full assurance that "chestnut orchards" will spring up in the wake of a pest.

In heroic attempts to aid in the rehabilitation of the chestnut, they are not confined to our government alone, although the Department of Agriculture may be looked upon as the leader in this respect since they have unlimited facilities to probe deeply and fully into the matter. Hortoculturalists everywhere; both professional and amateur, are wide awake and alert in this struggle and encouraging results are already manifest. From early indications we may find ground to venture the suggestion that the future chestnut will be of somewhat different character as compared with the native, for oriental influence of exotic trees are making themselves felt in developing blight resistant strains.

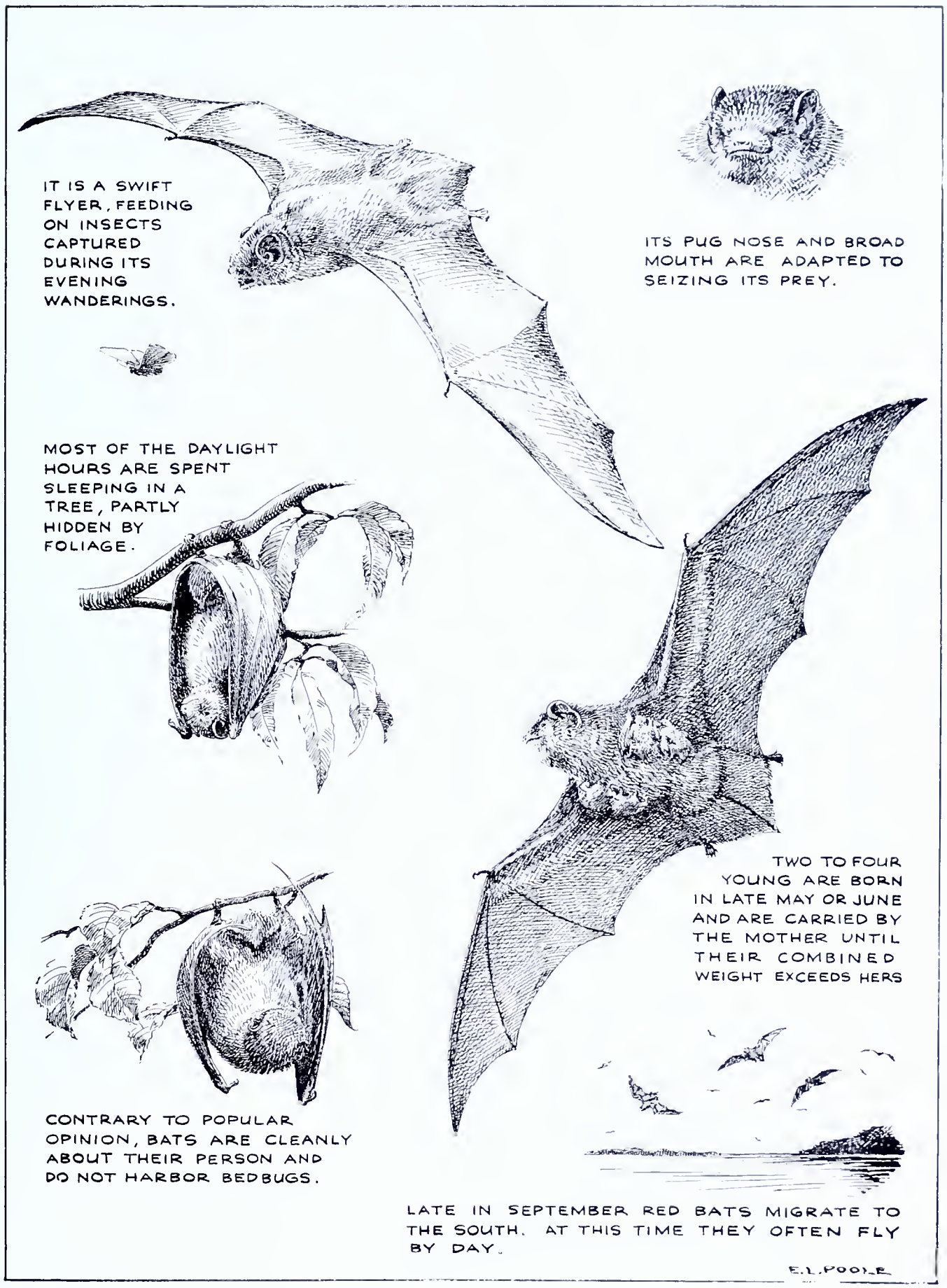
When the final chapter of the story of the chestnut shall have been written, and the exciting drama of rehabilitation realized, we may believe the chestnut shall be welcomed back into our forests and orchards with pomp and ceremony accorded no other tree. Not only will it concern us, but the happy forest families will, again, dwell in a land of plenty. They will know no want.

May we suppose that Joyce Kilmer was looking toward a chestnut tree when he wrote that beautiful poem "Trees".

I think that I shall never see
A poem lovely as a tree.

"For the first time since the large parking area has been in use at the Pymatuning Refuge, cars were parked on the temporary area on July 4. During the early afternoon the parking area was filled. It is estimated that more than 5,000 persons visited the Museum between 8:00 A. M. and 8:00 P. M."—Game Protector Burt L. Oudette, Crawford County.

THE RED BAT



Wildlife Syndicate—1940

MR. FARMER

Leave a Few Shocks of Corn Stand for Wildlife This Winter

PENNSYLVANIA GAME NEWS

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TEN CENTS

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SEPTEMBER 1940

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By Myron E. Shoemaker

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WILDLIFE—THEN AND NOW
(A historical contest feature)

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CONSERVATION EDUCATION IN TENNESSEE
By J. N. Bailey

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THE GREAT OUTDOORS
By Harris G. Breth

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RECENT DEVELOPMENTS IN THE LAND PURCHASE PROGRAM
By W. Gard. Conklin

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PARTNERS OF THE TRAIL
By Jack Anderson

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Cover by E. L. Poole

UNION LABEL 6

GROUNDHOG OBITUARY

A newspaper release appearing in a local paper recently carried the following scare head lines: **"The victim, 30, was mistaken for a groundhog and shot through the head."** The article went on to say that the young man was shot as he lay on the ground near a stone quarry, that the top of his head was mistaken for a woodchuck, and that he was instantly killed by a shot from a .32 calibre rifle. It is believed that the unfortunate victim was lying on his stomach watching for a woodchuck. He wore no hat, and when he moved his head another woodchuck hunter mistook him for one of the animals and fired.

Last year a number of men were shot at in mistake for woodchucks, some of them fatally. Usually such "accidents" occur as a result of pure carelessness. The Game Commission investigated all of these cases in an effort to determine the circumstances, and to enter prosecution against the responsible parties; also to revoke licenses for long periods.

There is absolutely no excuse for shooting a human being in mistake for a bird or an animal. On the other hand a word of caution to everyone might not be amiss. If your actions in the woods or fields are such as to mislead some other person to mistake you for some wild creature, a certain amount of the responsibility is yours. The man who dresses properly and does nothing to mislead some less cautious hunter who might otherwise take a pot shot at him is not only safeguarding himself, but the other fellow as well. Play safe! Wear plenty of **brilliant red** while hunting.

LAY PLANS NOW FOR WINTER

THE artificial feeding of wildlife, except during extended periods of deep snows, is rarely necessary unless there is a definite lack of natural food. In view of this fact, sportsmen's organizations, 4-H clubs, Boy Scouts and other groups interested in feeding wildlife in winter should give the matter serious thought before outlining their program. Now is the time to lay your plans and organize the machinery to do a good constructive job.

The sections to be covered should be surveyed from the standpoint of the present food supply to the end that grain or other food will not be distributed this winter in areas where natural food is abundant unless, as was stated before, deep snows cover the ground for long periods of time. Stress should be placed upon those sections where the natural food and cover are scarce. There is where the feeding stations should be erected long in advance of winter snows even though the snowfall may only be light and no real emergency occurs.

If you do construct feeding stations, scatter them as widely as possible. Avoid bringing all your game to a few points. If you do the predators will play havoc. On the other hand, grains and other food taken into the mountains and promiscuously scattered to the four winds means so much money and effort wasted on the part of those responsible.

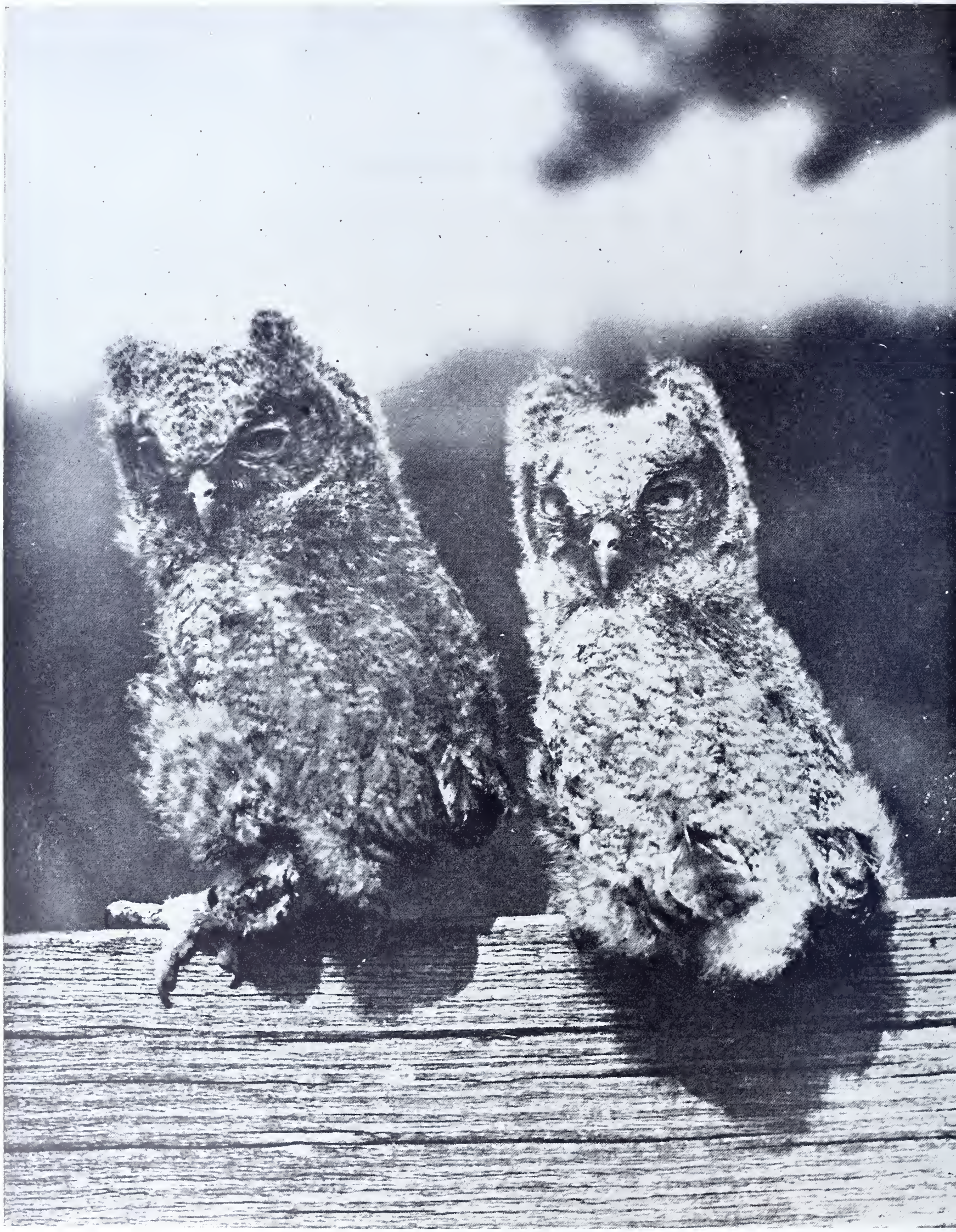
If you contemplate a feeding program this winter, be sure to map it out intelligently and then follow it through with everything you've got. Remember also that there are others who are interested that cannot contribute their time but who would gladly contribute a little money or a little food if they are approached properly.

Now is the time to interview your farmer friends in an effort to get them to let a few shocks of corn, or a few rows of uncut corn, stand where they will do the most good for wildlife. That's about all you can ask a farmer to do in addition to the many other things he does for wildlife the year round. Better yet, why not offer to pay for the grain left standing for game?

And do not forget the orchardist or the fellow who runs a cider press. Cull apples and apple pomace, or "pummies", are high in nutritive value and much relished by deer and other forest wildlife. There are many sources of supply. Why not start contacting them now?

By all means enlist the services of the 4-H clubs, the Future Farmers of America, and the Boy Scouts. These youngsters are our future citizens, and if we do not have sense enough to try to develop in them the right attitude toward conservation now we shall be faced with the very same problems 20 years from now as we are today. Feeding wildlife is just one method of expressing and developing that attitude. Do not fail to enlist these groups in this worthwhile undertaking, and when next spring rolls around, or even before, give the Game Commission a list of the organizations who assisted you so that the Commission in turn may publicize their fine services in the pages of this magazine.

Plan your winter game feeding programs even before your plans are completed for that fall hunting trip.



(Young Screech Owls)

Be Wise . . . Read the Game Laws

PLANTING TREES FOR WILDLIFE

by

*John M. Phillips**

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WHEN Columbus Discovered America, the white race fell heir to the finest country in the world, a rich land covered with many magnificent forests, a land teeming with wildlife, the Paradise of the Indian.

In the work of policing, protecting, and preserving these forests which stood here for countless ages, birds and beasts served each in his sphere, performing a useful work for which the Great Spirit created him.

In searching for grubs, ants and other insects, bears, the white-wings of the forests, tore to pieces rotten logs and uprooted the tree stumps to make room for new trees, scattering the fragments on the forest floor, where they disintegrated quickly and became fertilizer. The buffalo, elk, deer, rabbits and other grazing and browsing animals destroyed weeds and pruned the trees, throwing the growth to the tops, making timber. Turkeys, grouse, and other birds destroyed ground insects. The woodpecker family policed the trunks and large branches of the trees while the warblers and other species of small birds cleansed and protected the small limbs and foliage. The squirrels planted nuts and the birds distributed seeds. The industrious beavers built dams which conserved the water and conserved silt which created fertile meadows. The predators prevented undue increase in wildlife by destroying the weak and sick while the scavengers removed the dead and prevented infection and disease.

To the birds and mammals we owe our forests and many fertile meadows.

The white man, by the use of the axe, fire, plow, sawmill, and gun together with the drainage and pollution of our waters, the importation of noxious fish, birds, insects, and blights and the commercialization of forests and wildlife has almost destroyed the Indian Paradise.

Today, our conservationists are bewailing the destruction of our flora and fauna and are making strenuous efforts to replace both our forests and wildlife.

The first trees to be cut to clear farms and later to be commercialized were the black walnut, butternut, hickory, oak and chestnut, all bearing mast. The wild mulberry, wild cherry, gum, persimmon, and many other valuable fruit trees followed and as a result, today there is very little food for wildlife in our remaining forests.

Our first settlers used walnut, our finest and most valuable North American hard wood because it is easily split and worked, for fence rails, houses, furniture, and other common uses. Ever since guns have been made in America, they have been stocked with choice walnut and during our many wars millions of our finest trees have been sacrificed for this purpose. Prior to the World War, Germany purchased our finest walnut, presumably for furniture and veneer, but most of it was used throughout Europe for gun stocks and airplane propellor blades.

When we entered the war, we used the best of the remaining walnut for the same purpose, so that now these valuable trees, known as North American mahogany and as valuable as mahogany, are almost extinct in many sections.

Our hickory trees have been used for axe and pick handles, wheel spokes and other purposes, where a strong tough wood is required, so that few of them are left. The blight which destroyed our chestnut trees was a calamity, not only in the loss of valuable wood but because our bear, deer, turkeys, grouse and squirrels fed on the nuts during the fall, becoming fat and strong, enabling them to endure severe winters. The beechnut now takes the place of the chestnut, but it is a poor substitute.

Our Forestry Department and sportsmen are planting almost exclusively pines, hemlock, spruces and other soft woods for future lumber and have neglected our more valuable hardwood nut and other mast bearing trees. The reason for this is that coniferous trees can be grown from seeds almost as easily as grain and the seedlings cheaply handled, which makes a better showing for the forestry departments. While good cover, coniferous trees furnish little food for wildlife, and their needles form a carpet on the forest floor which kills all ground vegetation and harbors mice and rats which eat the seeds, and spread to farms where they destroy crops and trees.

It was in 1905 that our Pennsylvania Game Commission first realized the scarcity of natural food for wildlife in Pennsylvania and initiated a program of mast and fruit tree planting.

This program was under the direction of a commission member who for years had tried vainly to interest the sportsmen of the State in this farsighted project. Failing to arouse the older generation to an interest in replanting the State's forest for the benefit of wildlife, he had turned to the school children, and later after he had assisted in their organization, to the Boy Scouts, hoping to build for the future by fostering in them an interest in forestry and the protection and propagation of wildlife. As an incentive, he distributed to them many thousands of Russian mulberry and sweet cherry trees, with the understanding that one half of the fruit produced was to be dedicated to the birds.

This commissioner later also enlisted in his planting program our more than 100 game protectors. These men planted hundreds of thousands of fruit, nut and other mast bearing trees, and shrubs and vines throughout the State and to the man who planted the most, the commission awarded a 28 gauge double barrelled shot gun.

During the World War our Boy Scouts were asked by the Federal Government to find and report all walnut trees suitable for gun stocks and airplane blades. To replace trees destroyed for this purpose Scouts in Allegheny County, under the direction of the commissioner, immediately started the planting of walnuts.

There are now about 8,000 Boy Scouts in Allegheny County. For a number of years the writer, through the Pittsburgh Chamber of Commerce, has been offering a silver cup to the Troop planting the most nuts in the county. The troops awarded the cup have planted from 16,000 to 24,000 nuts of different species yearly.

The National Council of the Boy Scouts of America has set aside one week every Fall to be known as "Boy Scout Nut Planting Week" in which over 800,000 Scouts are asked to gather and plant all varieties of nuts. Throughout Pennsylvania the Scouts now cooperate with the Game Commission in its plantings.

Scouts enjoy nut and fruit tree planting hikes. They enthusiastically plant trees from which in eight to ten years they will share fruit and nuts with wildlife, but they are less interested in planting coniferous trees which when matured in 50 to 100 years will be cut for lumber.

The Boy Scouts have been congratulated by many conservation associations including the International Association of Game and Fish and the Conservation Commissioners for their valuable work in planting nut and fruit bearing trees, shrubs and vines to produce food for wildlife in the Winter. The latest recruits in this work are the 75,000 forward looking women who make up the Pennsylvania Federation of Clubs. They are specializing in dogwood for the flowers, also because the trees produce berries for wildlife.

Although our sportsmen who will benefit most from the Scouts' activities have been doing commendable work in the preservation of our wild waterfowl, assisting in the purification of streams, feeding game in the Winter and other conservation measures, many of them have overlooked the natural feeding of our upland game which winters with us.

(Continued on Page 31)

STANDARDS OF IMPROVEMENT

As the Commission set certain standards of performance just so much it seeks constantly to effect improvement. It is the Commission's duty therefore to establish the principle to all of its employees that they seek constantly to effect improvement in methods of conducting the Commission's business. Employees should be particularly watchful of routine functions and those not dealing directly with operations of the Commission to make certain that everyone is keeping pace with conservation progress. Every important system in practice, unless constantly tested, should be critically reviewed at least once every year. It is the Commission's plan to investigate, before approving expenditures or exchanging practices, the best tested procedure of a similar nature carried on within the Commission or in other states.

*Former President of the Game Commission of Pennsylvania and a member of the National Council, Boy Scouts of America.

Jack Miner showing two visitors his flock of decoys which are kept the year round on the Miner sanctuary. It is an unique picture, as it shows nine species of Wild Geese, also native Whistling Swans.

JACK MINER'S BIRD SANCTUARY

IT was away back in 1904 that my father started his bird sanctuary. Little did I think then, when I was but seven years of age, that today, some thirty-six years later, I would see his mail increased from one or two letters a day to sometimes four or five hundred letters in one delivery. These letters are from men and women in every walk of life, and from all over the world. Yes, and I have seen the number of visitors to his sanctuary increase from one or two a week to as high as thirteen thousand in one day. When the migration of the birds is at its peak we have thousands of visitors at our sanctuary. Many of them travel hundreds of miles to see the wild birds coming and going at their own free will and being given protection.

How did all this come about? As a small boy I used to go with father into the field occasionally to enjoy a day's hunting; and, coming home from these expeditions, I can still hear him saying, "Manly, this game warden system—prosecuting a man after he has shot a bird out of season—does not save the bird's life. We must have some system that will save the bird's life." It was with that spoken thought in mind that he posted our own farm, now our bird sanctuary, and began giving birds food and a place of safety. He said, "Some men spend thousands of dollars to attract birds to shoot. Why not spend a few thousand dollars to attract birds to conserve?"

His thought crystallized into a plan, and he bought some decoys. And most readers know the story of how the birds began to come, of how the flock increased, and what the accomplishments have been. Now it is not a question of how many will come to this cafeteria Jack Miner provides for them; it is a case of how many Jack Miner can take care of and feed.

Not that the sanctuary or refuge system has done away with the game warden or game overseer system. Far from it! We have to have laws, and we have to have men to enforce them. The two go together, namely, the place of safety for the birds and animals of the country, and the game wardens to keep the shooters out.

"Shooters", did I say? I mean that less than one per cent of them would violate the boundary lines of a game preserve. Yes, less than one per cent. This has been demonstrated here, because the shooters are among the best friends the Jack Miner Bird Sanctuary has, Why? Because the hunters well know that the sanctuary system takes nothing whatever from the man who enjoys his outing with gun and dog, but on the contrary provides a supply of game to be hunted outside the restricted area. In our case, by giving a refuge to migratory waterfowl we are not only providing game for the local hunters, but are saving a nest-egg supply not only for North America, but for Central and South America as well, evidence of which I will give later on in this article.

This place has gained the support of both the hunter and the non-hunter. It gives to the man who does not shoot, first chance with his camera. When the non-hunter is in the majority, as he is, he should have the preference, while the shooter gets the overflow of such a protected area. The late Eccles J. Gott, member of Parliament at Ottawa, said on the floor of the House in addressing his fellow members: "Jack Miner and his bird sanctuary have been the means of conserving and protecting more birds than all the game wardens in the Dominion." Whether or not that be accurate, still it shows the esteem in which Canadians hold this place. The Ottawa Citizen, one of Canada's largest and most influential newspapers, speaking editorially stated: "Not Watt, but a succession of inventors made the steam engine; not Bell but many electrical experiments made the telephone. Jack Miner, in this sense, has given us the bird sanctuary." In other words Jack Miner popularized the sanctuary idea. In every field of discovery there is always one man who stands out.

Bird Banding Activities

It took from 1904 to 1909 to get birds coming here in any quantity. Spoken in 1909, I can still hear these words of my father's ringing in my ears: "I wonder where these birds go from here? I wonder where they spend the winter? I wonder where they spend the summer?" All such musings at that time ended in a question mark, and

By MANLY F. MINER

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a big one at that. Then I remember father sending me to Detroit, some thirty miles away, to get him some sheet aluminum. He had made up his mind to be like "Zacky" of old and "see for himself." He decided to band these birds. Yes, aluminum was what he sent me for. It was the first time I had heard the word and, a lad of twelve, I kept repeating to myself, "Aluminum . . . aluminum", so I would not forget it.

To make a long story short, in August, 1909, father banded his first bird, which was a duck. In January, 1910, it was shot by Dr. W. E. Bray of Anderson, South Carolina. This constitutes the first complete record on this continent of when and where a bird was banded and when and where it was shot.

Naturally it made the studies at the sanctuary much more fascinating. So father got busy making nets with which to catch the ducks for banding. It was a case of build and tear down, and rebuild, and tear down and rebuild again. His net, which he had to invent, has been built and rebuilt perhaps twenty-five times. Yet from 1909 to 1915 he banded thousands of ducks. Then, wanting to extend his field of banding, he started banding Canada Geese. Today he has banded over 50,000 ducks and 23,000 Canada Geese; and this activity has furnished indisputable evidence of the migration of birds on this continent, covering a period of some thirty-one years, from 1909 to 1940.

A whole book could be written on the facts learned from these banding activities. Ducks have been reported shot from most of the West Indies, Central America, and South America; while Canada Geese have been reported from the Eskimos, far beyond civilization in the Arctic regions, and from every State in the United States east of the Mississippi. Records compiled from such reports prove that these birds keep to definite flight lanes. It has been proved that they go, year after year, to their same nesting and breeding quarters, and year after year winter in the same locality. I used to wonder why we never saw any brant here, nor any white-fronts. But after we began banding ducks and Canada Geese we soon learned that they all keep to their chosen flight lanes from north to south and back again.

We tried several experiments. For instance, some few years ago, with the help of friends and the cooperation of the Government we caught twenty-five Canada Geese, put a special band on their legs, boxed them up and sent them by express to Winnipeg. From there they were taken to Grant Lake, in that vicinity, and liberated among a flock of 20,000 western geese. To our amazement not one of the twenty-five stayed in the West, with the western geese. They returned to their eastern flight lane and all were eventually reported shot east of the Mississippi, in the same flight lane followed regularly by their kind for generations back.

Imagine!—out of 50,000 ducks and 23,000 geese we have banded over a period of thirty-one years, less than one per cent have been reported from west of the Mississippi. They have all stayed in their flight lanes east of the Mississippi valley. It has been agreed upon by all bird-banders that there are three flight lanes on the continent, namely the Pacific, the Central, and the Eastern. The Pacific flight lane ranges from the Pacific Coast to the Rockies. The birds which follow this flight lane nest in Alaska, return south between the Pacific Coast and the Rockies, and winter in California and on the Gulf of California. Birds raised in Western Canada and the Yukon territory migrate south along the Central flight lane, west of the Mississippi to the Rockies. Those that nest in Baffin Land, the Hudson's Bay and James Bay territories, migrate south by a lane east of the Mississippi and on the way find rest and food at Jack Miner's sanctuary.

In other words, the ducks and geese raised in Manitoba, Saskatchewan and Alberta never see Pennsylvania and the Atlantic Coast, any more than the ones that visit here see the mid-western States. This does not say that there is not the occasional one that will leave such flight lanes; but I am speaking of the mass flight, year after year. As stated above, I could write a book on the facts of migration which we have secured from our banding activities over a period of thirty-one years, but I must deal with the value of the Jack Miner Bird Sanctuary, not to this generation alone but to generations yet to be.

The Value of Jack Miner's Activities

If you will look at your map you will learn that, geographically speaking, Jack Miner's Bird Sanctuary at Kingsville is located at a very important spot on the Great Lakes. Kingsville is the most southerly town in the whole Dominion of Canada. All the waterfowl that come down from the north in this eastern section of Canada, when they hit the Great Lakes, follow these waterways to this point which forms a bottle-neck in their passage across the Great Lakes. Here they find the Jack Miner Sanctuary. Here they congregate for food and protection for seven months of the year.

They start congregating about October 1st, and they remain until May 1st. A goodly number migrate each season, but there is always a nestegg supply that stays all winter. For instance, last winter we had between 5,000 and 10,000 that stopped here all winter. This group never saw the United States in the winter of 1939-1940. They were banded. At least a large proportion of them were. They will rear a flock of perhaps 25 000

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Jack Miner, founder of the Jack Miner Bird Sanctuary at Kingville, Ontario, and his eldest son, Manly F. Miner, banding a Canada Goose to study its route of migration to gain educational and scientific knowledge.

The Red Fox has held closer to its twenty year average abundance than the Gray Fox.

SOME MORE FOXY BUSINESS*

By Douglas E. Wade

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IN the August issue of the Game News, under the title of "Foxy Business", the writer presented a brief discussion of the complexity of research problems dealing with predatory animals—particularly the red and gray foxes. This work is so involved because it has its roots interminably tangled with animal, plant, and human ecology.

A thorough study, wherein we shall be able to piece together the historical data of the red and gray foxes; wherein we shall learn how to determine accurately fox populations and predict trends in these populations; wherein we shall learn to understand why foxes move out of certain habitats and into others; wherein we shall adopt the most just methods of control when such are necessary; and wherein we shall have educated most people to understand predation in its fullness; will probably go on for many generations.

Since a longtime study is essential to establish the basic principles of predation, we welcome the policy—one accepted by the Pennsylvania Game Commission — that the duty of any soil, plant, or animal conservation agency is to retain an abundant native flora and fauna. To follow such a policy means that we cannot lean too heavily one way or the other. Yet, it also means that any agency adhering to this policy and its ramifications must not be only dynamic but must be flexible to a degree commensurate with the dynamics of the soils, plants, and animals it would retain and use.

At particular times, certain plants and animals are considered harmful to our interests. Now, throughout most of the State, if current signs can be read correctly, we may be suffering from an over-abundance of red and gray foxes. In consequence, we are faced with some rather difficult problems, the foremost being the proposition of fox abundances: What are the proper numbers at which to hold red and gray foxes so that the good done by them balances the harm? We can't handle this problem until we have devised some practical and accurate means of censusing foxes yearly. We must also learn to tally the good and the harm done at various population levels. Granted that we did find a satisfactory way of censusing foxes and their prey, and granted that we were able to determine their harmful and beneficial values, wouldn't we have to keep on re-solving the latter problem in light of the dynamics of plant and animal communities? Furthermore, isn't it entirely possible that in the future our concept of what is good and what is harm may change? Hasn't it changed repeatedly in the past? Surely though, **until wildlife workers have solved these problems, we must rely upon the policy of retaining a rich flora and fauna.** This policy will give the foxes and other animals or birds of questionable value the necessary protection.

As you were informed in the last issue of this magazine, we were to carry on with this fox question and explain some of the findings of the current fox survey. At the present stage of this research, we find that there are three distinct tools with which to work. First, there are the bounty claim records of the Game Commission. These records are accurate and give excellent data on the numbers and habitats of gray foxes annually presented for bounty. The total number of gray foxes probated yearly probably represents fully the total number killed in the State. Second, there are the pelt purchase and sale records of the Pennsylvania fur-dealers. These records are a fair indicator of the number of red foxes annually killed in the State. Third, there is that vast reservoir of observations and opinion of mammalogists, naturalists, farmers, hunters, trappers, and the Game Commission field officers. The usefulness of this last tool, of course, is dependent upon the integrity, skill, and thoroughness of the person making an observation or offering an opinion. All three tools have been used in trying to determine the past and the present status of the red and gray foxes in Pennsylvania.

Given the tools, the first step was to get a picture of the numbers of foxes yearly killed in the State. A record of the kill of foxes is given in Figure 1. Herein, the red fox data is based upon the records of fur-dealers, and the gray fox records come from the Game Commission bounty office. The reader will note that the red fox, which has not had a bounty placed upon it during the period under scrutiny, has held closer to its twenty-year average than has the gray fox which has had a bounty on its head during the period. In fact, this past fiscal year the gray fox take soared to a record high—2,500 individuals above its twenty-year average. Interpret this figure as you will, but don't forget to consider annual market values

*The preliminary research represented in this article would not have been possible without the assistance of Mr. William G. Grimm, Game Commission Research Investigator, and the combined efforts of the entire Pennsylvania Game Commission field force.

of raw pelts, general economic conditions in the State and Nation, the influence of fur farms on the wild native-fur market, the influence of foreign conditions on the fur market, the breeding potential of each fox species, the habitat conditions for each species, the number of skilled trappers and hunters, the intensity of take methods, the introduction of new take methods, and the fact that in the course of two years' time fox hunters in 13 counties have shown that they have a primary interest in the chase and not in the kill. Don't forget that, except in certain counties, our neighboring States pay no bounty on either fox species. Also bear in mind that the gray fox may be indigenous to this State in a greater sense than its red cousin. Remember too, that both species may be subject to the effects of a cycle, and have diseases and parasites that often radically reduce their numbers. The writer is inclined to suspect that perhaps lumbering operations, closing of lands to hunting and trapping, a decrease in the number of skilled trappers, reverting of farm lands to a submarginal state, and lowering market prices, figure heavily in the final analysis. The writer also believes that this pronounced fox increase of the past three years may be a prelude to the decimating swing of the "cycle".

The next step in the solution, presented in a brief manner in Table 1 and Figure 2, is going to be hard to comprehend. This step deals with opinions concerning the trends of fox populations. Forms were mailed to the Game Commission field men requesting from them certain information concerning foxes in their localities. They were asked to state whenever possible, whether the red and gray fox populations were increasing, remaining the same, or decreasing, during each of the past seven years. In addition to the field men, a number of outstanding fox trappers, hunters, and fur-dealers were asked the same question. Altogether, 525 persons contributed to this study.

Since there are three variables—the population is increasing, decreasing, or holding its own—it is necessary that each exert an equal effect on each other. To do this first total the respective columns of opinions and then convert to percentages (see Table 1). Then to discover which way the trend is moving, take the difference between the largest and the next largest percentages. The result obtained furnishes us with a trend unit for each year which forms the basis for the curves presented in Figure 2. Thus at a glance we have a picture of the population trends over a period of seven years. The reader must, however, be cautioned against using Figure 2 as an indicator of the actual numbers of the fox populations. **It is not a census.** It merely shows that when a fox population increases, regardless of the exact amount, then more people are going to notice the increase and record their opinions accordingly under the increase possibility.

Trend records are valuable in that they give us a look into the future. From Figure 2, we can interpret that the fox populations are leveling off and may even drop. The greatest rises seemed to have come in the

(Continued on Page 29)

Fig. 1—Take of Foxes in Pennsylvania.

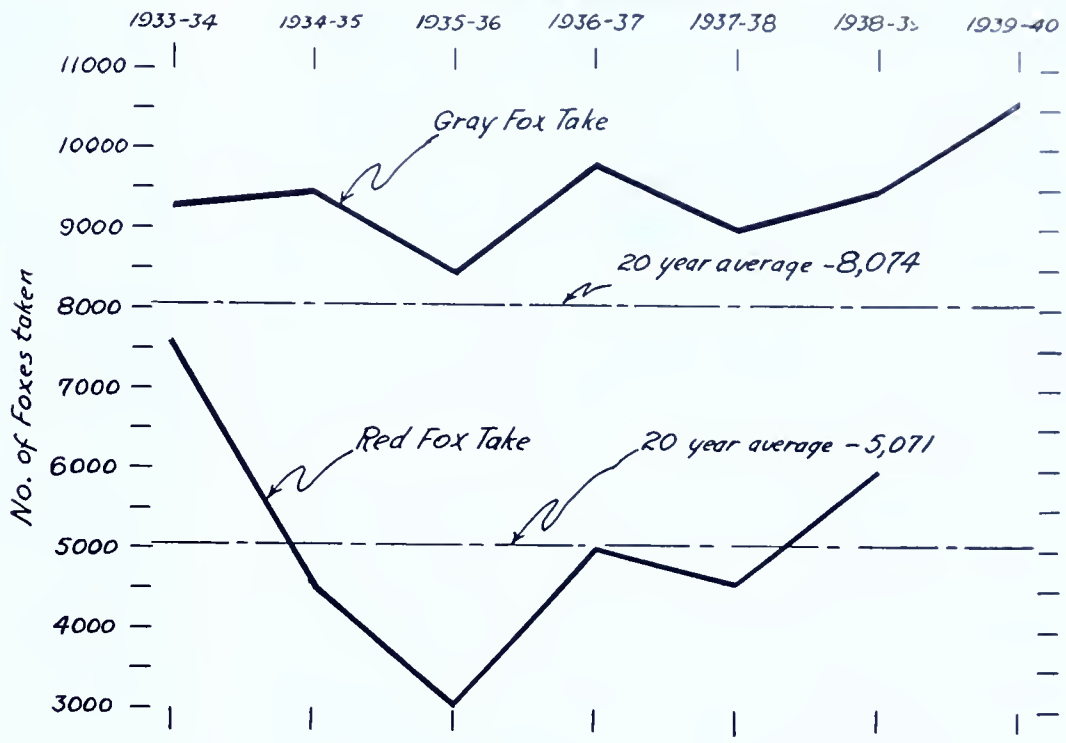


Fig. 2—Fox population trends in Pennsylvania.

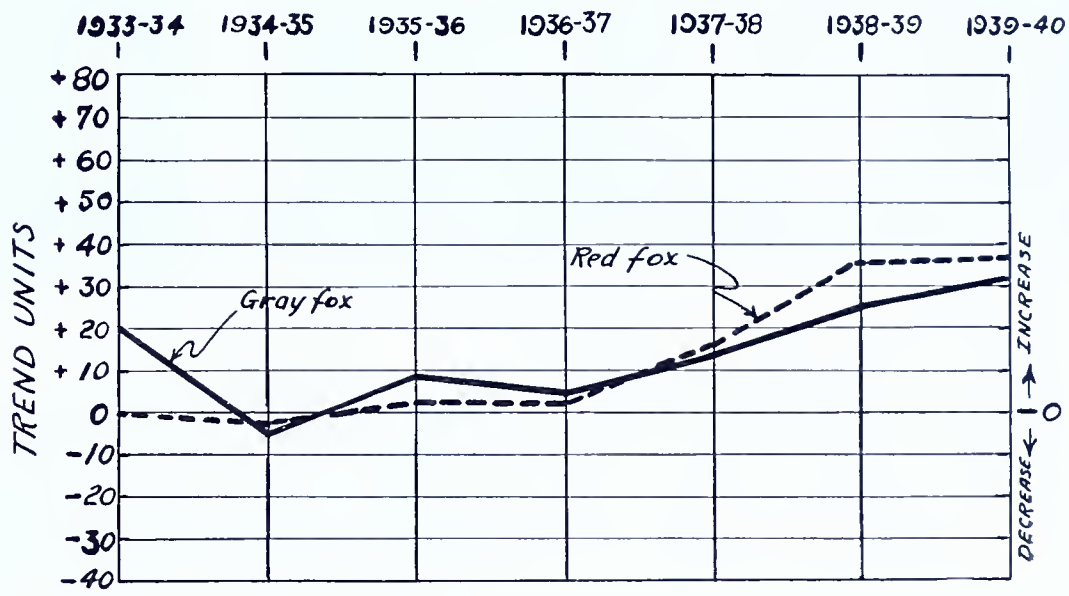
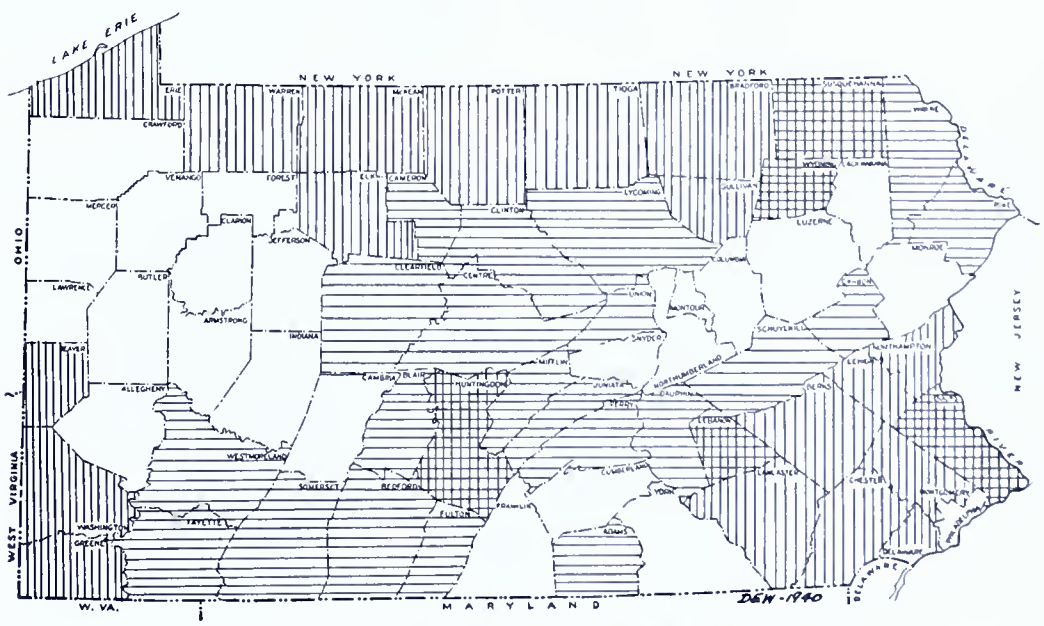


Fig. 3—Outline map of Pennsylvania showing counties having heavy take of Red and Gray Foxes (as of 1939-1940).



Vertical lines represent heavy Red Fox take counties.
Horizontal lines represent heavy Gray Fox take counties.

Figure 1.—During periods of deep snow, corn is often the only food not covered. Persuade your friends to let patches of it standing.

Figure 3.—A good practice is to leave several rows of partly picked corn near good cover for both pheasants and quail.

November Foods of Ringneck Pheasants and Bobwhites

EARLY in the fall of 1938 arrangements were made with game protectors and sportsmen in Pennsylvania to send in to the Pennsylvania Cooperative Wildlife Research Unit for analysis the crops of ringneck pheasants *(Phasianus colchicus torquatus)* and bobwhites *(Colinus virginianus virginianus)* killed during the hunting season of that year. In all, 423 pheasant and 61 bobwhite crops were received by the Unit. The analyses were reported by Logan J. Bennett and P. F. English in an article entitled "The Fall Foods of Ringneck Pheasants and Bobwhites" (Bennett and English, 1939). The group of cooperators that sent crops in 1938 also sent in 84 pheasant and 28 bobwhite crops during the 1939 hunting season. This article is a report on the analyses of the 1939 crops and a discussion of the analyses of both seasons. In 1938 the hunting season was from October 31 to November 26 for pheasants and from October 31 to November 12 for quail. In 1939 the pheasant season extended from November 1 to November 30 and the quail season from November 1 to November 21.

It was thought that information obtained from the analyses would provide the Game Commission and sportsmen with information as to what was needed to provide better food conditions for the birds, at least in fall. Although a study covering only one month of the year certainly cannot answer questions concerning food for the other 11 months, it should give a fairly accurate picture of what the birds prefer in the fall season.

Students enrolled in Techniques in Wildlife Management, *Zoology 509*, The Pennsylvania State College, aided materially in making the analyses reported on in this article, the method used being that described by Bennett and English in 1939.

Results of 1939 Pheasant Crop Analyses

In all, 41 identified species of plants and 8 groups of insects and other animals were found in the 84 pheasant crops (table 1). Vegetable matter occurred 189 times, animal matter, 17 times, and gravel, 12 times. Three of the crops were empty.

Corn was found in 37 of the crops. This grain constituted 41 percent of the total

TABLE 1.—Food in 84 pheasant crops, in order of occurrence November 1939

Item	Times occurring
Vegetable:	
Corn *(Zea mays)*	37
Lesser ragweed *(Ambrosia artemisiifolia)*	22
Smartweed *(Polygonum* spp.[1])	15
Buckwheat *(Fagopyrum esculentum)*	13
Wild grapes *(Vitis* spp.)	13
Ground cherry *(Physalis* spp.)	10
Sorghum *(Holcus* spp.)	10
Unknown seeds	5
Wheat *(Triticum aestivum)*	5
Pokeweed *(Phytolacca decandra)*	4
Virginia creeper *(Psedera* spp.)	4
Wild cherry *(Prunus* spp.)	4
Dogwood *(Cornus* spp.)	3
Unknown leaves	3
Unknown grass seeds	3
Acorns *(Quercus* spp.)	2
Apple *(Pyrus* spp.)	2
Barley *(Hordeum vulgare)*	2
Bean *(Phaseolus* spp.)	2
Black locust *(Robinia Pseudo-Acacia)*	2
Elderberry *(Sambucus* spp.)	2
Green foxtail *(Setaria viridis)*	2
Oats *(Avena sativa)*	2
Spice bush *(Benzoin aestivale)*	2
Sticktight *(Bidens* spp.)	2
Sunflower *(Helianthus annuus)*	2
Sweet Cicely *(Osmorhiza Claytoni)*	2
Bittersweet *(Celastrus scandens)*	1
Bramble *(Rubus* sp.)	1
Cultivated cherry *(Prunus* sp.)	1
Foxtail grass *(Setaria glauca)*	1
Greater ragweed *(Ambrosia trifida)*	1
Gum *(Nyssa sylvatica)*	1

(Continued)

[1] Paper No. 18 from the Pennsylvania Cooperative Wildlife Research Unit. Fish and Wildlife Service (U. S. Department of The Interior), The Pennsylvania State College, Pennsylvania Game Commission, and the American Wildlife Institute cooperating.

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By P. F. English and Logan J. Bennett

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TABLE 1.—Food in 84 pheasant crops, in order of occurrence November 1939.—Continued

Item	Times occurring
Haw *(Crataegus sp.)*	1
Milkweed *(Asclepias sp.)*	1
Pigweed *(Amaranthus retroflexus)*	1
Sedge *(Carex sp.)*	1
Skunk cabbage *(Symplocarpus foetidus)*	1
Sweet clover *(Melilotus alba)*	1
Unidentified tuber	1
Virburnum *(Virburnum sp.)*	1
Animal:	
Grasshoppers	7
Beetles	3
Insect pupa cases	2
Butterfly	1
Butterfly pupa case	1
Cricket	1
Oyster shell (frag.)	1
Snail	1
Gravel:	
Gravel and dirt	12

volume of food consumed. Corn, lesser ragweed, buckwheat, sorghum, and wild grapes, in order of importance, comprised 73 percent of the total volume of food, the remaining 27 percent being made up of 36 groups of plant material and 8 groups of animal matter.

Comparison of the 1938 and 1939 Seasons

The five most important foods taken in 1938 and 1939 are shown in table 2. Corn and lesser ragweed rated first and second respectively, in both years. Grasshoppers ranked third in 1938 and dropped far down the list in 1939. Buckwheat was fourth in 1938 and third in 1939. Skunk cabbage placed fifth in 1938 but was far down the list in 1939. Wild grapes were far down the list in 1938 and occupied fifth place in 1939. The much smaller number of crops examined from the 1939 season may account for some of the shifting of places of these secondary foods. When the total contents are segregated into crop seeds, noncrop seeds, animal matter, and gravel, however, the analyses for 1939 are similar to those for 1938.

Results of 1939 Bobwhite Crop Analyses

Seventeen vegetable species and 6 groups of animals were found in the 28 bobwhite crops. One crop was empty. Vegetable matter was recorded 69 times; animal matter, 9 times; and gravel, 6 times. Lesser ragweed was found in 15 of the 28 crops (table 3). On the basis of volume, lesser ragweed made up 35 percent of the food consumed. Lesser ragweed, corn, foxtail grass, buckwheat, and wheat, in the order named, were the five most important foods taken.

TABLE 2.—Comparison of the five most important pheasant foods eaten in 1938 and 1939

Food	Percent by volume
In 1938:	
Corn	54.0
Lesser ragweed	5.2
Grasshoppers	4.5
Buckwheat	3.2
Skunk cabbage	2.5
In 1939:	
Corn	41.4
Lesser ragweed	10.0
Buckwheat	10.0
Sorghum	7.0
Wild grapes	5.0

TABLE 3—Food in 28 bobwhite crops, in order of occurrence November 1939

Item	Times occurring
Vegetable:	
Lesser ragweed *(Ambrosia artemisiifolia)*	15
Foxtail grass *(Setaria glauca)*	11
Ash *(Fraxinus spp.)*	6
Buckwheat *(Fagopyrum esculentum)*	6
Green foxtail *(Setaria viridis)*	5
Touch-me-not *(Impatiens spp.)*	5
Corn *(Zea mays)*	4
Wild cherry *(Prunus spp.)*	3
Acorns *(Quercus spp.)*	2
Black locust *(Robinia Pseudo-Acacia)*	2
Ground cherry *(Physalis spp.)*	2
Unknown plant fragments	2
Wild grapes *(Vitis spp.)*	2
Greater ragweed *(Ambrosia trifida)*	1
Pigweed *(Amaranthus retroflexus)*	1
Sunflower *(Helianthus annuus)*	1
Unknown seeds	1
Animal:	
Beetles	2
Grasshoppers	2
Unknown insects	2
Ant	1
Snail	1
Stink bug	1
Gravel:	
Gravel and dirt	6

Comparison of the 1938 and 1939 Seasons

In both 1938 and 1939 lesser ragweed and corn ranked first and second, respectively (table 4). Wheat ranked third in 1938 and fifth in 1939. Foxtail grass ranked fourth in 1938 and third in 1939. Buckwheat ranked fifth in 1938 and fourth in 1939. A greater amount of lesser rangweed, foxtail grass, and buckwheat was eaten in 1939 than in 1938. The smaller number of crops examined from the 1939 season may account for the shifting in positions of the food items and for the differences in volume. When the foods for both seasons are apportioned as crop seeds, animal matter, and gravel, there is no great difference in the type of foods taken (table 5).

General Conclusions

In fall the food habits of the ringneck pheasant in Pennsylvania are practically the same as are those of pheasants in Wisconsin (Gigstead, 1937), Minnesota (Fried, 1940), Michigan (Dalke, 1937), South Dakota (Severin, 1933), and Nebraska (Swenk, 1930). The main pheasant range in Pennsylvania is confined to the better agricultural areas. The close association of pheasant range there with corn indicates that this food is the most important food item and that it is probably one of the main crop requirements. Standing

TABLE 4.—Comparison of the five most important bobwhite foods eaten in 1938 and 1939

Food	Percent by volume
In 1938:	
Lesser ragweed	25.0
Corn	21.0
Wheat	9.0
Foxtail grass	7.0
Buckwheat	5.0
In 1939:	
Lesser ragweed	35.0
Corn	15.0
Foxtail grass	13.0
Buckwheat	10.0
Wheat	8.0

TABLE 5.—Analysis of crops

Divisions	Pheasants 1938 Percent	Pheasants 1939 Percent	Bobwhites 1938 Percent	Bobwhites 1939 Percent
Crop seeds and attendant crop weed seeds	74	76	81	86
Noncrop seeds (grape, dogwood, etc.)	16	18	11	10
Animal matter	6	3	5	0.2
Gravel	4	3	3	3.8

corn is available as food during times of deep snow, when many valuable food species are covered. Other domestic grains and weed seeds, as lesser ragweed and foxtail grass, are also important, but these are not available over long periods in winter because of deep snow.

Lesser ragweed is the most important food of the bobwhite in fall. This weed is largely dependent upon cultivation and is found in all corn and small-grain fields. In times of deep snow, however, lesser ragweed is unavailable. During these periods other food nearby, as standing corn, becomes necessary for bobwhites (fig. 1).

Recommendations

The Pennsylvania Game Commission, farmers, and sportsmen are carrying on several practices to provide fall and winter food for pheasants and bobwhites. These practices are brifly reviewed here. The spring planting of food patches adjacent to good brushy cover provides a great amount of desirable

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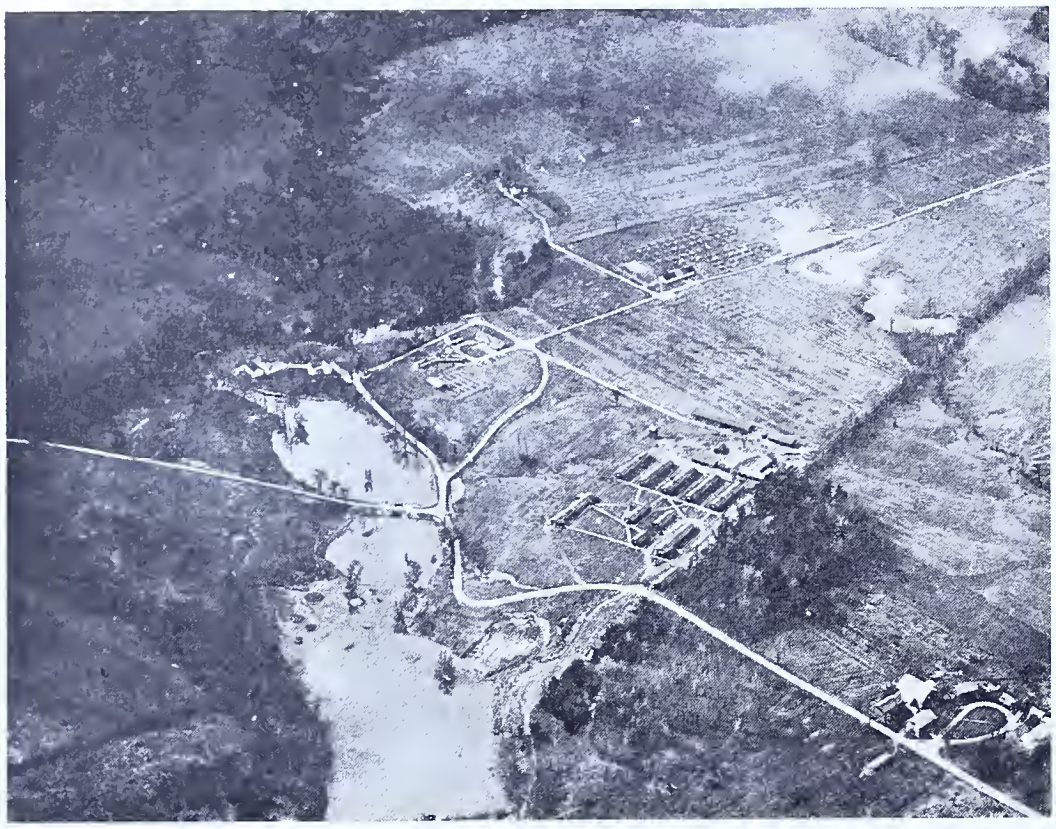
The Pennsylvania Game Commission Food-patch Mixture.



One of the "Four Horses" is PROPAGATION, both natural and artificial. This is an air view of the New York State Wildlife Research at Delmar, where propagation techniques are being developed and tested.

The Four Horsemen of Conservation

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by

Gardiner Bump

Superintendent of Game, New York State Conservation Department

THE history of Wildlife conservation, as with any other great movement, is a story of trial and error, of advances and retreats, of pushing forward three steps and sliding back two. Then, because of the interest, intensive and active but not always understanding, which a large section of our population takes in this work, our progress is likely to be at best lopsided. Panaceas and "quick result" remedies catch the public eye and inspire our imagination. There then arises a hue and cry for such projects out of all proportion to the probable productiveness of the supposed panacea.

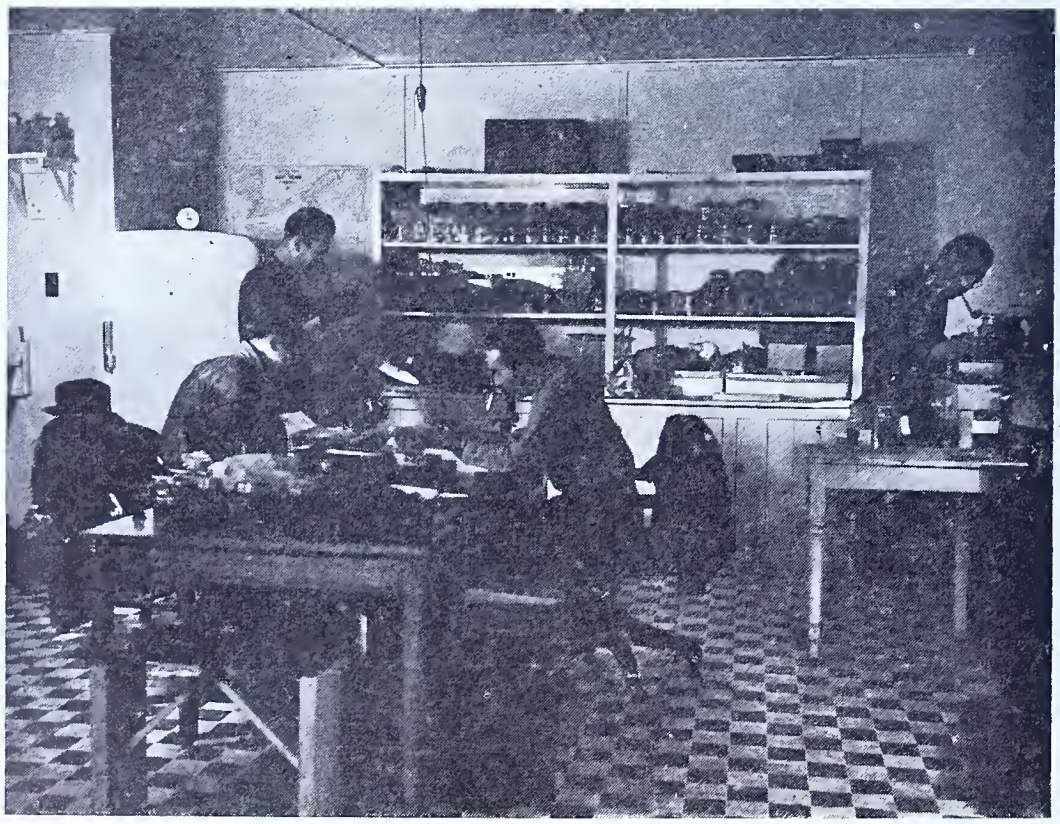
Yet if we examine these critically we will find that though each has its place in the complex mosaic that is conservation, no one of them is the whole design.

Failure to realize this simple point to date has led to the expenditure of much relatively unproductive conservation effort, the result of misguided but active enthusiasm. Many **sportsmen** have pinned their hopes for a larger Wildlife crop on an attempt to control the harvest and to protect the brood stock. Others see in artificial propagation of fish or game the open sesame to the door of plenty. Still others put up their money for refuges.

Every year more emphasis is placed upon getting minor changes in the game laws through State or Federal legislatures than in all other conservation activities combined. Then, too, other than sportsmen are actively engaged in furthering their own interpretations of what constitutes good Wildlife conservation. The **nature lover,** with a flair towards protection of all things, would harvest his out-of-doors largely in terms of inspiration and enjoyment gained mainly without killing or collecting. The **biologist** is particularly interested in the opportunity of studying the inter-relationships of plants and animals in their normal environment; while to the **research man** the song of the brook is often but a problem to be solved. The cutting of trees and the trapping of animals is an anathema to the **wilderness lover** who would let nature do her own harvesting of the inevitable surplus. In other words, each interprets conservation in accordance with his particular interests therein.

Broadly speaking, we have no logical quarrel with any of these interpretations providing we accept the basic idea that conservation is **wise use.** It is when groups attempt to force their ideas to the exclusion of others that unproductive wrangling results.

I am urging this point of view because a day seldom passes in which I do not find progress both prodded and hindered by the



Research is the lead horse. Its findings are the guide-posts for tomorrow's wildlife practice. Inside this laboratory at the New York State Wildlife Research Center, pathologists are checking disease and other factors controlling game abundance.

enthusiasm of some well-meaning individual or group for his particular cause. By way of illustration—this week there crossed my desk a letter urging greater protection for deer in the Adirondacks; a criticism of our winter feeding methods for pheasants; a demand that we establish a new game farm for raising European black cock; a suggestion for the establishment of a waterfowl refuge; a recommended change in the season for deer; a blast favoring the imposition of bounties on predators; a demand for more game for liberation. Each writer harbored the feeling that conservation would be materially served by acting on his suggestion. Few of them have taken the trouble to factually surround their subject. Many will take it as a personal affront, so important as to justify their subsequent opposition to the entire conservation program which we represent, should we be so unresponsive as to turn down their idea. Cooly considered, this might prove amusing did this tendency not make real progress the more difficult.

To recognize the cause of such a difficulty is to go a long ways towards overcoming it. When Hendrick Hudson first pushed the blunt prow of his Half-moon into Manhattan harbor many species of Wildlife were abundant. By 1708 deer had become so scarce thereabouts as to call for some remedial action. Consequently the General Assembly passed a protective law. In 1791 grouse were similarly protected in three counties of the State. Thus was started a train of efforts to legislate game back into abundance. The majority of sportsmen today still believe the passage of restrictive game laws to represent the most important method of ensuring a continuous Wildlife crop.

But in spite of restrictions placed upon game take, backed up by the long arm of the law in the form of game protectors, fluctuations, mostly downwards, in the amount of game continued. Then came a new idea. Our native species seemed to be incapable of providing hunting and fishing for all. In other states or countries certain species were to be found in abundance. Ever in hopes of a miracle, and usually without taking time to determine either their chances of survival or their possible effect upon our own Wildlife, shipments of unfortunate foreigners in infinite variety and number found their way into our coverts. In New York State alone at least twenty-two separate species of game birds were imported. Beginning with the Egyptian or migratory quail in the 1870's, the list runs through guinea fowl, black grouse, capercailzie, turkey, heath hen, Western prairie chicken, sharp-tailed grouse, several species of California quail, Hungarian partridge, and a number of exotic pheasants

A sympathetic understanding of wildlife problems is so necessary to control the actions of individuals that EDUCATION must be an important member of the double team pulling the conservation wagon. Here's a school group being told the story of pheasant management in New York.

The story is the same for game mammals. Deer—Japanese, red, German and Siberian—elk, moose, antelopes, European wild boar, have all been released in some numbers at various times. The European red hare, first turned loose on the east side of the Hudson River in Dutchess and in Columbia Counties, became such a pest as to require the payment of over $4,000 of bounties on some 16,000 hares before they were brought under control. Its cousin, the European rabbit, was introduced on Gardiner's Island, but, fortunately, disappeared. An unfortunate escape of a pair of coyotes cost one New York State County $800 in bounties before this certainly undesirable species was eliminated. Cottontails from the Midwest and varying hares from Maine have been liberated, perhaps to the confusion of the biologist and the detriment of the sportsman's pocketbook. Among the game birds introduced, only the pheasant has justified its importer's early promises. Yet today the sportsmanic woods are full of individuals urging the expenditure of large sums on the importation of still more game, ever hopeful that another miracle may result. Still, the problem of providing adequate hunting opportunities has not been solved.

Realizing that a harvestable surplus of Wildlife could occur only in the presence of an adequate brood stock, in 1897 the State of New York began to raise pheasants for liberation. From 1910 on the idea of replacing depleted game stocks with artificially raised birds became so generally accepted as to motivate the establishment of many State and innumerable private game farms. For two decades thereafter so successful were these units in encouraging the spread of the adaptable pheasant that no one paused to consider the part these farms might play in

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PROTECTION of the seed stock and control of the harvest combine as one of the horses conservationists are riding. A game protector here is checking hunters afield to help assure an efficient harvest control.

The shotgun, the rifle, the decoy, and the crow call will never bring about the extermination of this wise and wary bird, but they may help to control it whenever its numbers become too abundant locally.

A DISSERTATION ON CROW SHOOTING

SOME years ago I engaged in a serious study of the language of the crow and eventually learned to carry on extended conversations with crows in their own tongue. One man paid me the high compliment of remarking "that a crow would rather talk to you than to any other crow." I found out, too, that aside from knowing how to reproduce exactly each dulcet note, the successful crow caller needs to be able to tell the birds a good convincing story, for crows are great appreciators of true narrative form and do not like to find the climax in the wrong place. Gertrude Stein could never call a crow, nor Mr. Hemingway, Irvin Cobb would do well at it and Alexander Woollcott, if he could be persuaded to study the language of the crow, could, I am sure, command considerable fees from shooters who would wish to employ him.

Crows are like those humans who read pulp magazine stories. They are steadfast in their devotion to a standard plot and resent any attempts to introduce new material, or style, or form.

So, with this in mind and the wooden crow calls hung about our necks, we drive along a country road until we find a promising patch of woods, park the car, assemble the shotguns, and select a spot where, concealed from prospective crows by foliage, we shall yet be able to see our visitors when they come. Oftentimes I have found myself well concealed beneath an evergreen with a great cloud of excited crows, like Heavenly witnesses, yelling overhead unable to see me and unable myself to see a single bird. Frequently someone's shirt, cap, or face is exposed and the crows immediately depart the premises to perch well out of range and exchange derisive notes on your looks and general stupidity.

It is a warm, sunshiny June morning. The crows having finished their earlier foraging are scattered over the countryside in a leisurely humor conducive of mischief and adventure.

Your role is that of a blase, gossipy crow who has discovered something mildly interesting but which may well prove on further investigation to be exciting or even scandalous. You are to enact, in crow language and accent, the part of a gentleman at his club during the drowsy after-luncheon time who finds on a page of his magazine a particularly intriguing photograph of someone's picture of "Susanna and the Elders" or who, perhaps, observes the beginnings of an argument in the street outside that gives good promise of thickening into a fist fight. Whichever it is he gives notice to his fellows of his aroused interest. They may come to join him at once or, if especially replete, they may merely open their eyes and await definite manifestation from him that the incident is really panning out and likely to be worth the effort of crossing the room to observe.

And you, as the instigator of mass hysteria among the crows, do the same thing with your crow call by producing a low toned, confidential: "Kahaw—kahaw—kahaw" counting three between each word.

The translation runs as follows:

"Well, well, frightfully dull, isn't it, with the girls all busy with their egg laying. I hear they're having very good frog spearing up on Sucker Brook. I thought I might fly up this afternoon if anyone would care to join me."

Frequently you will receive a response to such lazy observations, but even though you don't you may be sure that every crow within earshot—and that's much farther than you would suppose—is listening.

By COL. H. P. SHELDON

Courtesy of "Country Life"

★

You have your audience now but you must not try to hurry the action. Talk some more, using the same low-voiced, conversational style and intersperse a few wicked chuckles occasionally like the old roue you are, or are supposed to be.

"Kahaw—Kahaw—Kahaw."

"I could do with a pint of ale very nicely. Fearfully enervating to be required to wear black this weather. They say that of the quintuplets the young Corbys have been squawking about, one turns out to be a screech owl. Haw! Haw! I could tell you something very funny about that."

After a few minutes of this idle sort of gossip, and if no crows have come flapping in to visit with you, it is safe to introduce the next theme. It is done thus:

"Caw—Caw—Caw"—single syllables in a livelier, interrogative style.

"I say, there's something rather odd here. It's under a brush pile. I can't quite make out what in hell it is. Somebody's damn house cat probably. Stand by, everybody, while I take another look. Is that you, Kitty? Oh! So it is you, is it? Come out o' that, you dirty little wretch, and I and my friends will clip your ears for you!"

Then comes the invocation and invective.

"Caw—caw—caw—carr—carr—carr—carr."

The first three words, given loudly and rapidly, announce that your earlier suspicions have been justified.

"It's a cat (or an owl or a fox) and we've got the rascal where we want him! Come on lads, come on!"

The rest of the sentence is a low throaty snarl expressive of hatred, contempt and savage pleasure at the pain and humiliation of a helpless foe.

"You thief, you rogue, you sneaking, night hunting rascal! Take that! And that! Oh, you would, would you! Take that, you spitting, wall-eyed reprobate!"

If your crow audience hasn't been fooled by the same ruse on a recent occasion they are sure to come hustling, clacking their beaks and yelling encouragement as they come. Generally a scout will come over first, going fast and trying to get the situation mapped out. Unless one can be fairly certain of dropping the scout it is well to let him go through without a shot, to return and bring up his main column. Then if you can, without showing youreslf, drop a crow from the yelling milling mass in some spot where the others can see the carcass, you may be able sometimes to shoot up to a dozen before the gathering becomes suspicious and disperses. On one occasion a friend and I downed 23 crows in five minutes at a single stand without using any sort of a decoy except our crow call.

When the battle is over it is our custom simply to move on to the next woodland and do it all over again. During the past season in a region overrun with crow shooters we managed to get crows in over the guns on an average of four out of five attempts. It is much easier in areas where little or no calling has been done. Under such circumstances I have known of many instances when two men have shot a hundred or more crows in a day with no other enticement than a crow call.

One June afternoon, soon after we had acquired a certain conversational art, we set out intending to hold a series of crow salons about the countryside. We had stopped at a Yankee neighbor's to give him greeting when, seeing a pair of shotguns in the car, he wanted to know what we were out to shoot at that season.

"Crows," said we.

"You oughter have rifles, then. You can't git close enough to a crow to kill him with a shotgun."

'We'd like to lay you a little bet on that, Mister."

"I wouldn't bet a nickel with neither one o' you fellers on nothin', but I'd like to git me a few good dead crows to hang up in my cornfield."

"How many?"

"Well, I guess I c'n use all you fellers'll git today."

So we left him and, during the afternoon, by dint of much yelling and squalling and undignified conduct we reduced 79 crows to possession. These we placed in three large paper sacks which we then hid in the garage. It was warm and after a day or two of lying-in-state these sacks were whistling like peanut roasters.

In that condition we loaded them into the rear of an open car and sought our neighbor's premises. A cautious survey having disclosed no one in view, we slipped into high and swooped down like Valkyries with our sacks full of dead heroes on that defenseless home. Seventy-nine dead crows will make a very considerable showing scattered over a ball park; on Harry's small front lawn they made a solid sable mantle as we hastily emptied our sacks, got into the car, got the car in high and departed from the scene of the outrage.

When we returned that evening the crows had disappeared. Harry came out to greet us affably and exchange comment on current topics. He said never a word about those crows and we could only guess, as we drove on, with what agonies and retchings the removal had been accomplished. We met again on several occasions with no better success. Harry was his kindly, humorous self, interesting, but with never a reference to that awful charnel pit.

Then one day as we were leaving after one of these chats, he glanced at us, one grave glance, and said:

"Next time, gentlemen, next time I b'lieve two will be ample, thank ye."

An owl decoy will get results if it is used on a flyway or near one of the great roosts, but we found it laborious to go about climbing trees with a stuffed owl. Undignified, too, for gentlemen supposed to have attained a certain amount of poise, decorum, and gravity. You can't go traveling around with a stuffed owl in your hand without inviting comment and inquiry, and it's even worse with a live owl.

We had a live one once which we purchased for a considerable sum in the expectation of unlimited crow shooting. We are kindly men in a way, and suffered some qualms for what we thought would be Bubo's dislike of being tied to a limb with a storm of crows wheeling and charging at him. But Bubo, we found, was not one to ask favors or grant them. All he asked was two wicked claws and a savage beak full of living flesh preferably our own. He had his wish often enough despite the armor of heavy gloves. When the owl got his grip the victim would dance and curse while his friend took the pliers from the car and pulled each talon clear by main strength. There was always a good chance that our feathered playmate, finding one hold broken, would clamp down like a steel trap in another place. Climbing a tree with Bubo was something of an adventure. He was an incurable hypochondriac and we finally gave him up.

Then someone brought us two young red-shouldered hawks, brother and sister, and again we had visions of crow shooting luxury. But Sister ate Brother completely up one night and gave us an unblinking, fratricidal glare when we went to feed the couple next morning. Sister had few really kindly qualities in her nature. She was no easier to approach than an ancient war chariot trimmed with sickles, blades, spikes, and hooks. Certainly she was no girl at all to take for a petting party on a limb of a tree fifty feet off the ground. Her attachments were many and none of them amorous, and we finally gave over our attempts to win that fierce heart of hers.

I am not one of those who believe that the destruction of every last crow is a consummation devoutly to be wished. I feel that I would miss him perhaps more than any other non-game bird. His voice is not beautiful but it has a bold and cheering quality when his ragged squadrons come up from the Southland in the teeth of a bitter March wind. Is he a murderer because he robs birds' nests and spears the fledglings? Nature, for her own inscrutable purposes, forces him to such conduct, and in the long run you may be sure that the wild society of the woods and fields is better off for it. We are too apt to invest crows, snakes, owls and other predatory creatures with evil traits of character which are to be found only in ourselves. We curse the crow at the robin's nest and sell a shipload of scrap iron to our fellow men who will, we know, make bombs from it to drop on others of our fellow men We are always engaged in some murderous or adulterous or thieving business, but the crow even at his unwilful worst is up to mischief for only one of the twelve months of the year. I like him for his courage, for his complete self-reliance, and for the sense of robust humor that I am sure he has.

In comparison with other birds, crows have become overabundant. They have flourished and multiplied on the adversities which diminished other beasts and fowl, and so successfully that it is necessary to reduce their numbers. But I'm for doing it decently with a shotgun or rifle. If here and there it is required that entire colonies of crows be exterminated by bombs or poison, let us leave the dirty task to experienced, qualified men paid to do the thing efficiently and as humanely as may be.

The shotgun, the rifle, the decoy, and the crow call will never bring about the extermination of this wise bird, but they may help to make it unnecessary to invoke scientific mass slaughter to keep the crow within bounds.

The Educator's Place in Conservation

By Myron E. Shoemaker

Photo courtesy Tennessee Department of Conservation.
The teachers in our training schools and teachers' colleges will have to carry the message to the school children.

AFTER considerable study, research and surveys both locally and nationally it is now well known among conservationists that there is an imperative need for a solid front to conserve and restore our natural resources—the soil, forests, waters, minerals, wildlife and all other elements of nature.

We have witnessed and experienced the destructive practices of man by mass use and abuse for several generations, and if the destruction continues without some comprehensive program of conservation we will face a national calamity.

We know that thousands of residents in the dust bowl have been forced to move to more fertile fields where, through their ignorance, they will continue to live off the land without too much thought of conservation. We fully realize that the great cosmopolitan group of citizens have destroyed our wildlife and other resources because of ignorance and insufficient knowledge of their true value.

Thousands of our school teachers want to teach conservation education but they do not know what to teach, how to teach it, where to secure proper materials, nor do they have the authority to teach it.

Upon the conservation agencies and the educational authorities rests the burden of cooperating in such a way that we may proceed without further delay in the program to conserve these essential resources. It is time to cut red tape.

There is sufficient materials and activity—aside from text books—at this time to proceed in a cooperative movement with the schools, the teachers colleges and the service clubs, etc., so that the movement may become crystallized. Why experiment any further while the destruction of our resources is continually mounting?

If the automobile industry had waited in its infancy to perfect the cars which we now have there would have been but a few cars owned today. If our conservation education program waits to take care of all of the red tape before it is placed in the schools, it may be too late. We can proceed and gain by experience as we proceed. Why continue to tell the public that tomorrow we will have a conservation education program but that it will be a long process to get it moving. A thousand years would not be too long to prepare if we reached it in time, but what will be here in a thousand years? What will we have left in 10 years the way we are destroying?

Educational programs of the past have accepted new programs for the cause of humanity. Education can do a lot for conservation, but education and the educators are ignorant of how to proceed.

The teachers in our training schools and teachers colleges are going to be the first line of attack They will carry the message of conservation to thousands of school children, and to adults outside the school. They will be augmented by the activities outside the schools to further extend the message of conservation. In this way conservation will be made a vital and living thing.

In any program of business, education or progress there must be a general method of attack and some reason for the program or business to exist. There must be something offered besides suggestions, therefore to get our program moving the following additional things may be considered:

(1) There must be an objective and definite plans to attain success;

(2) There should be definite assurance that the program will be sound so that it may perpetuate over a long period of years;

(3) There should be careful preparation of the initial program in the methods of contact and what to use;

(4) There should be a careful review and assimilation of materials, etc., in the specific and associated subjects;

(5) There must be organization and cooperation between the various agencies to properly present and execute the general program;

(6) There should be cooperation of the various agencies in presenting the program so there will not be one agency passing out one theory and another, another theory; each must agree to unselfishly help the other;

(7) There must be careful methods of approach to insure against attacks from critics and fault finders who may feel that something is being forced upon them;

(8) There should be serious consideration of the magnitude and complexity of the problems involved in a new program;

(9) There should be unceasing effort to keep the program moving smoothly.

The conservationists and sportsmen know the meaning of true conservation and this must be sold to those who are ignorant of the true meaning and the possibilities of conservation. In their ignorance—for which they may not be blamed—there is a complete lack of understanding of many things which may be grouped as follows:

(1) There is a complete lack of comprehensive understanding of the true value of our natural resources;

(2) That the resources are not inexhaustible;

(3) That there is not "plenty more where that came from" unless we conserve and restore;

(4) There is a lack of understanding of the groups interested in conservation and the programs they foster and promote for purposes other than selfish motives;

(5) A lack of understanding of the value of our resources to our social, economic and political structures;

(6) A lack of understanding that the soil, forests, waters, minerals, and wildlife are the source of the raw materials that keep humanity in existence, and the wheels of industry rotating;

(7) That the vast recreational value of our social life would be impossible without nature providing for it;

(8) That cooperation of the public in general with the investigators and pioneers who are finding the facts and remedies to crystallize the program for the best results for the greatest good to the greatest number of people, is absolutely necessary;

(9) There is a lack of understanding of the local needs of a community and how to proceed to improve local conditions.

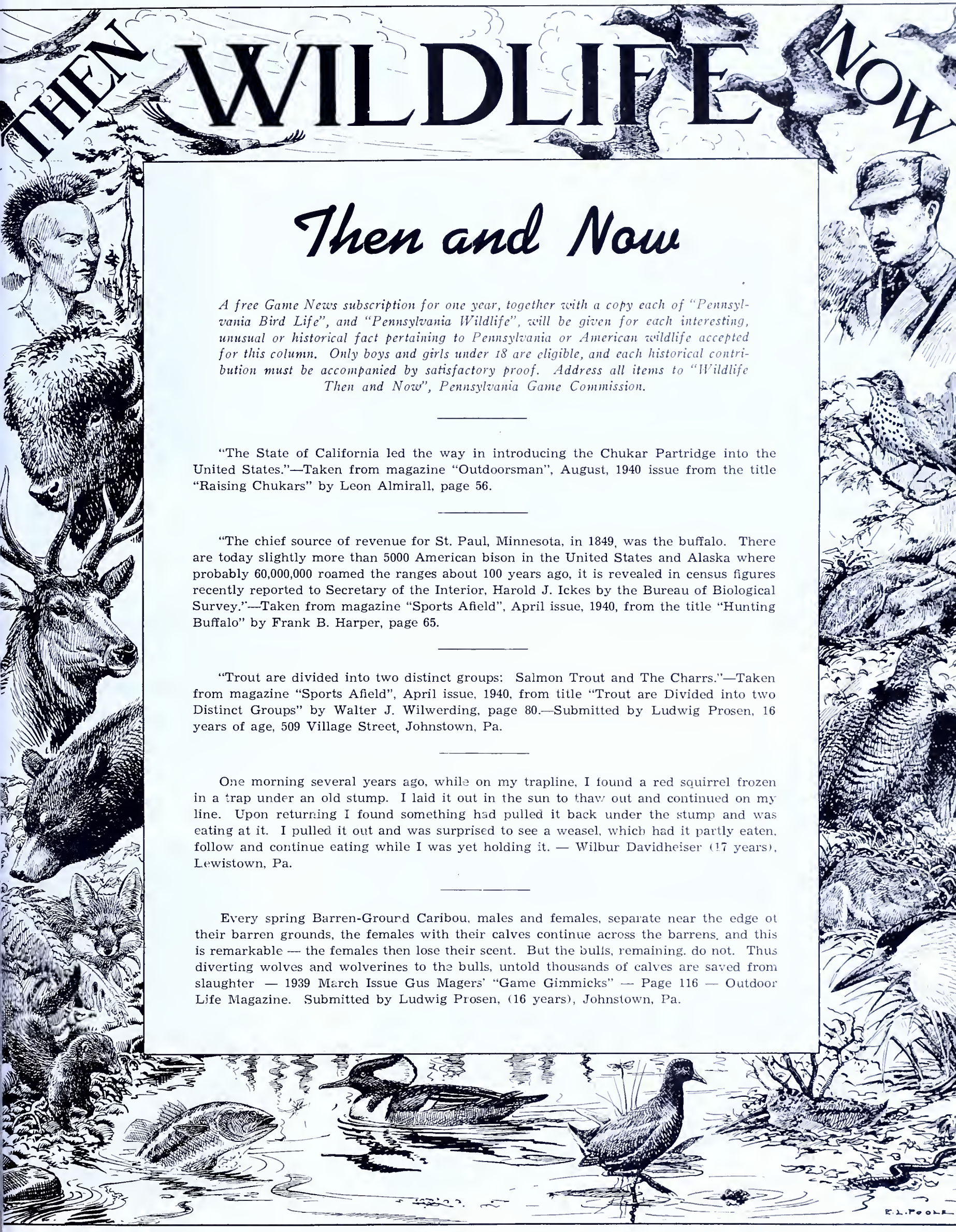
(10) A lack of understanding that just because another section of the country has become affected by destruction and desolation that there is no danger of it reaching their particular area;

(11) That other countries have become barren deserts because of ignorant destructive practices by mass use and abuse;

(12) That many sections of America have already been totally destroyed to drive the people to other communities and complicate matters;

(13) There is a lack of a responsibility for the welfare of the general community in which they live;

(Continued on Page 27)



Then and Now

A free Game News subscription for one year, together with a copy each of "Pennsylvania Bird Life", and "Pennsylvania Wildlife", will be given for each interesting, unusual or historical fact pertaining to Pennsylvania or American wildlife accepted for this column. Only boys and girls under 18 are eligible, and each historical contribution must be accompanied by satisfactory proof. Address all items to "Wildlife Then and Now", Pennsylvania Game Commission.

"The State of California led the way in introducing the Chukar Partridge into the United States."—Taken from magazine "Outdoorsman", August, 1940 issue from the title "Raising Chukars" by Leon Almirall, page 56.

"The chief source of revenue for St. Paul, Minnesota, in 1849, was the buffalo. There are today slightly more than 5000 American bison in the United States and Alaska where probably 60,000,000 roamed the ranges about 100 years ago, it is revealed in census figures recently reported to Secretary of the Interior, Harold J. Ickes by the Bureau of Biological Survey."—Taken from magazine "Sports Afield", April issue, 1940, from the title "Hunting Buffalo" by Frank B. Harper, page 65.

"Trout are divided into two distinct groups: Salmon Trout and The Charrs."—Taken from magazine "Sports Afield", April issue, 1940, from title "Trout are Divided into two Distinct Groups" by Walter J. Wilwerding, page 80.—Submitted by Ludwig Prosen, 16 years of age, 509 Village Street, Johnstown, Pa.

One morning several years ago, while on my trapline, I found a red squirrel frozen in a trap under an old stump. I laid it out in the sun to thaw out and continued on my line. Upon returning I found something had pulled it back under the stump and was eating at it. I pulled it out and was surprised to see a weasel, which had it partly eaten, follow and continue eating while I was yet holding it. — Wilbur Davidheiser (17 years), Lewistown, Pa.

Every spring Barren-Ground Caribou, males and females, separate near the edge of their barren grounds, the females with their calves continue across the barrens, and this is remarkable — the females then lose their scent. But the bulls, remaining, do not. Thus diverting wolves and wolverines to the bulls, untold thousands of calves are saved from slaughter — 1939 March Issue Gus Magers' "Game Gimmicks" — Page 116 — Outdoor Life Magazine. Submitted by Ludwig Prosen, (16 years), Johnstown, Pa.

He Who Sows His Seed Today Liv

Be Wise -

One of the most important
is the development of the St
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tablishment of many game f
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s to Harvest His Crop Another Day

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of the Commission's activities
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aphs.

Conservation Education

YOU really have an appetite when you have got up at dawn and sallie forth for a couple of hours into the otherwise quiet and still forest to invade the haunts of wild things, study nature's lessons and solve some of her mysterious workings.

This is written at a breakfast table in Norris where teachers and students from seven widely scattered counties of Tennessee have assembled for the six weeks Conservation Summer School of the University of Tennessee.

We have just returned from an early morning field trip to study birds in their native habitats. In our bird study, both in class rooms, work rooms, and in the out of doors we do more than just learn their names, their songs and means of identification. We study their needs, their economic values—their vital place in nature's scheme of things.

We didn't mind getting up so early after the first time or two. We have been on such excursions before. You hear and see so much more in the out doors at dawn and dusk—things you can't expect to be stirring at other times.

Early bird hikes take place three or four days each week, and on Friday we have an all-the-morning lecture and discussion. We have insect study from eight o'clock to noon on Monday and Wednesday and plant study on Tuesday and Thursday. The fore part of the afternoon is devoted to School-Community Relationships; the rest to an understanding of conservation problems and the study and development of materials, methods and techniques suitable for use in properly emphasizing conservation in the school program.

It's like that in our other studies, too. As a matter of fact all our activities, indoor or out, and meaningful. Else why bother? A cardinal purpose of education, as we see it here, is to develop the ability to recognize and analyze vital problems, and if possible to solve them.

Approach Is Practical

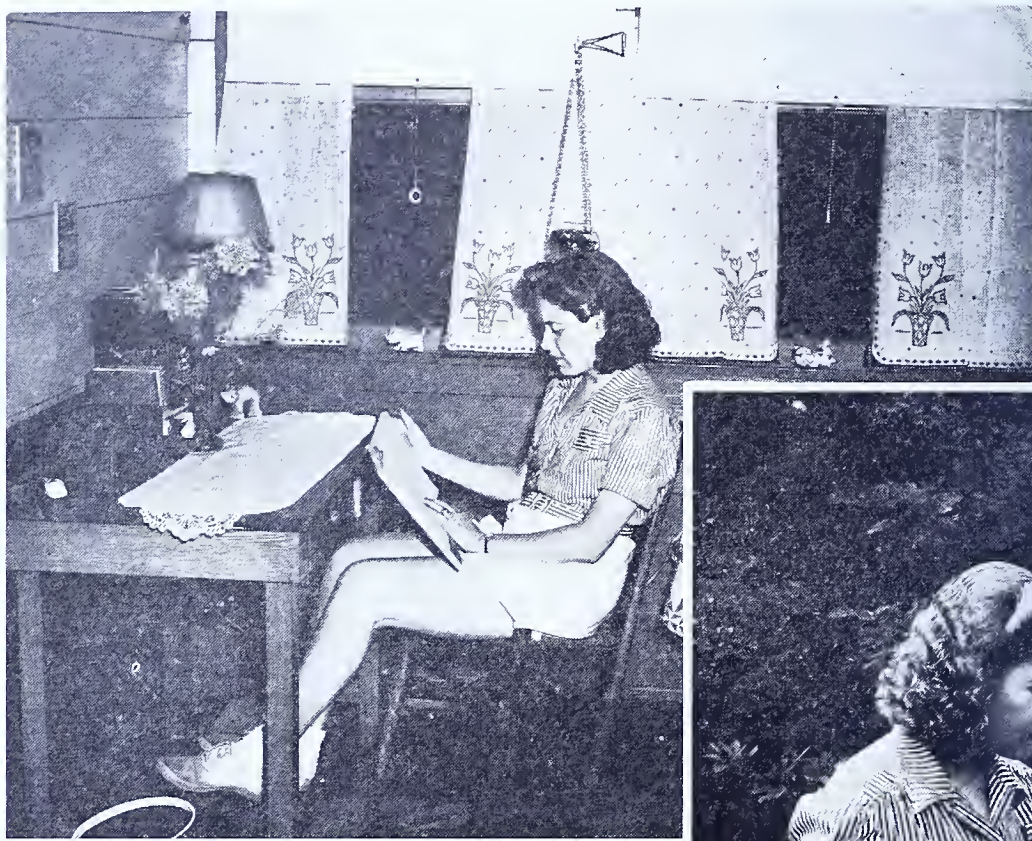
We think our approach to these problems, and the way they are dealt with is practical. Things are more convincing when actually seen and experienced. Indoor and artificial experiments and demonstrations are, to be sure, much to be preferred to abstract learning by reading words and using the imagination entirely, but here whenever possible we learn by doing, and next best, by seeing.

We believe that every one here will go home convinced that every community, urban or rural, offers unlimited challenging opportunities for studying both the need and to a varying extent, some of the means of conservation.

Norris is located in the heart of the greatest conservation project in the world and we have taken advantage of our situation here to study the very powerful and tangible lessons all about us.

Field Trips Valuable

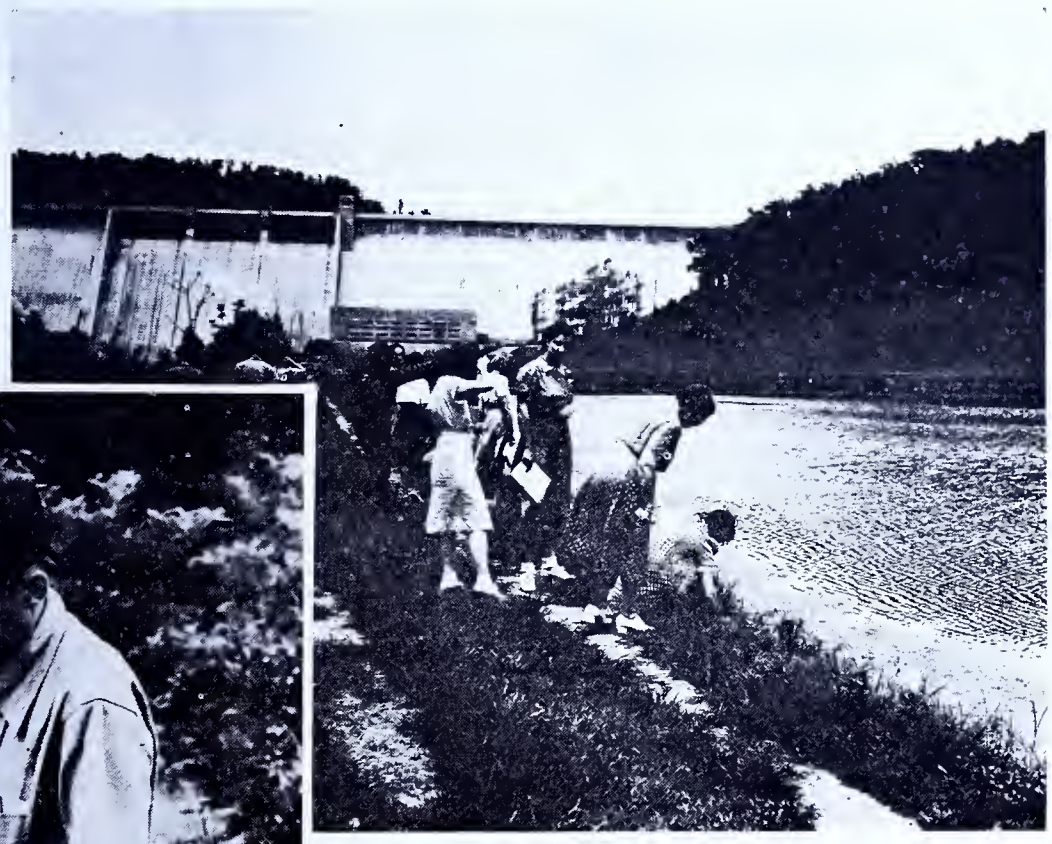
Field trips to study erosion control have shown its effect on land, on plants, on wildlife, on the lakes and streams and on the people. We have seen the interesting experiments carried on at the forest tree nursery where among many other things they are attempting to develop a blight resistant chestnut, walnut to grow on poor soil, persimmons



Inside the comfortable rooms of the dormitory shown below. Students have a splendid opportunity to pursue their studies unmolested during recess and evening hours.

Dormitory of the Tennessee Valley Authority at Norris Dam, not far from Knoxville, which was made available to the Department of Conservation as a headquarters for the Conservation Summer School.

n Tennessee By J. N. BAILEY



A group of students at the Fish Hatchery ponds below Norris Dam. Here they not only learn about fish life but about the foods that fish eat.

Students are taught entomology and frequent field trips supplement the work of the class room. Competent teachers from the State University teach this and other related subjects.

Botany is also taught both inside and outside the class room. Here again only the best qualified instructors are employed to teach the subject.

larger than apples, lespedesa eight feet high and so on.

At fish hatcheries we saw pool after pool of clear water darkened in spots by schools of black bass fry and fingerlings, rainbow and brook trout being raised to restock the heavily fished waters of East Tennessee.

We stood one morning on the crest of Roan Mountain where North Carolina joins Tennessee and watched the sun rise to illuminate a scene of unforgettable beauty—a landscape of unbelievable splendor where six hundred acres of purple rhododendron were just bursting into blossom on a mountain more than six thousand feet high.

Visit Game Farm

At Buffalo Springs Game Farm, in Grainger County, we observed every step in one of the most interesting and important activities of the Conservation Department, the hatching and rearing of bob white quail and chukar partridges. Thirty thousand are being raised to restock the depleted stock on farm lands throughout Tennessee.

Recently we made a tour of a portion of the Cherokee National Forest. We saw an area of virgin timber which is said to be the most representative stand of northern hardwood timber in the country—giant red oaks and hard maples, a mighty wild cherry five feet through, and majestic hemlocks standing like mighty monarchs in the forest. This is the best place you ever saw to study how the forest builds soil and holds water. You aren't likely to forget its matchless beauty either. It does something good for the soul.

We work on all such trips, all right. They aren't all picnics--but we have them too. One of the best was up on the lake. We chartered the big T. V. A. boat and took a 45 minute trip up to the Maryville Landing picnic grounds. Over red hot coals we broiled T-bone steaks and everybody had plenty for once.

Meets Individual Needs

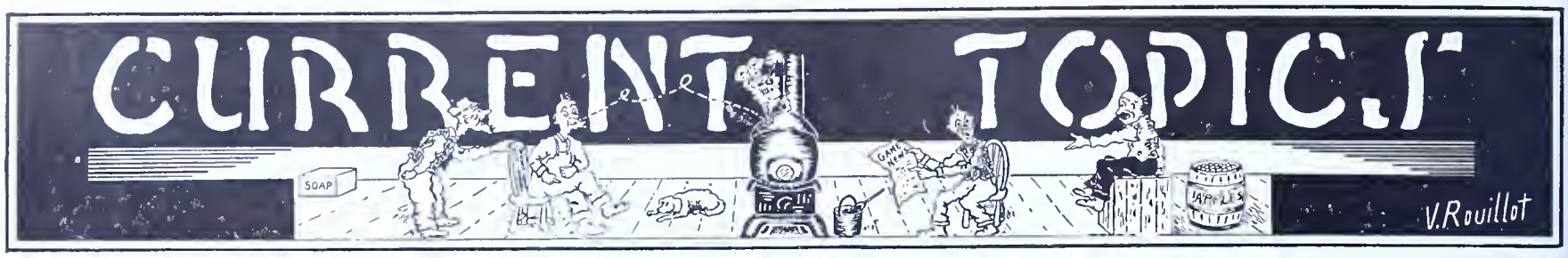
Our school isn't like the general run of summer schools in many ways. Here everything is as near practical, as profitable, and as pleasant as we can make it, and all activities and formal instruction are designed to meet the individual needs and requirements of the earnest student body.

The University realizing the great need for such training and the inadequacy of traditional courses to fill the need entered into a cooperative agreement with our State Conservation Department and the T. V. A. last year so that several laboratory courses might be given in this ideal location.

In 1939 there were four courses and the enrollment was not large. But the interest was great and the excellent work done by those who attended was considered by the University authorities reason enough to warrant their wanting it done again this summer.

So there are thirty-five of us here now with six courses to choose from. If last year's results are any criterion, schools and school teaching will be better in several counties of Tennessee than ever before.

There will be a bigger and better session at Norris next summer.



The appointment of J. Paul Miller, noted biologist and conservation worker, as Secretary of the American Wildlife Institute, has been announced by Frederick C. Walcott, President of that organization. C. M. Palmer, Jr., who resigned as Secretary to enter private business, has accepted an appointment to the Institute's Board of Trustees. Miller, who was born at Peoria. Illinois in 1904, spent the early part of his life on farms in Illinois, Montana and Washington. The new Institute Secretary graduated from Washington State College in 1929 where he majored in biology and pre-medics and minored in education, physics, and botany. He was a student of Dana J. Leffingwell and took graduate work at Washington State.

When the Biological Survey was given the responsibility of administering federal aid to wildlife or the so-called Pittman-Robertson Act in 1938 Miller was selected for the position he will leave to take charge of the Institute. The change in official personnel will become effective September 15, at which time Miller can be released from his present duties with the Fish and Wildlife Service of the U. S. Department of the Interior.

NATIONAL FOREST REGULATIONS

"It appears not to be generally known that Federal regulations of the Department of Agriculture back up the State Game Laws on the national forests. The attention of all hunters is called to Regulation T-7 in effect on Allegheny National Forest in Pennsylvania.

Regulation T-7 "The following acts are prohibited on Lands of the United States within National Forests:

Hunting, trapping, catching, disturbing, killing, or having in possession any kind of game animal, game or non-game bird or fish, or taking the eggs of any such bird, in violation of the Laws of the State in which such land is situated."

"The safety laws are also backed up by Regulation T-9 which also makes it a Federal offense to discharge firearms in the vicinity of camps, residence sites, recreation grounds, and areas, and over lakes or other bodies of water adjacent to or within such areas, whereby any person is exposed to injury as a result of such discharge.

"It is the policy of this Forest to aid the State enforcement officers in prosecuting under State laws rather than making use of the Federal Courts. The regulations exist as an added warning that violators may expect full punishment."—R. F. Hemingway, Forest Supervisor, Allegheny National Forest.

The Pennsylvania State Fox Hunters Association will conduct their "Field Trials and Bench Show" at Fawn Grove Pa., the week of October 21, 1940. The association extends to everyone a hearty invitation to enter their hounds in this meet.—J. Howard Carr, Secretary, 35 N. West Street, York, Pa.

CORRECTION

On Page 13 of the July, 1940 issue of the Pennsylvania Game News, in a Memorium to Ex-Governor John S. Fisher, through a typographical error it was stated "Governor Fisher came into office January 18, 1937." The correct inaugural date was January 18, 1927.

NOTES FROM THE FIELD

"About two weeks ago some careless motorist ran over three young raccoons just a few feet apart on the highway near my home, killing two and injuring the third one. A friend of mine picked up the injured one and brought it to me. It had its lower jaw and one rear leg broken. I have taken good care of it, and it is coming along fine and will soon be able to return to its woodland home.

I also have record of nine raccoons being killed on the highway within six miles of my home (near Polk, Pa.) within the past two months. We surely have some poor sportsmen behind these auto wheels."—R. B. Riddle, Deputy Game Protector, Venango County.

At a recent meeting the Crawford County Sportsmen's Association voted to commend the Pennsylvania Game Commission for its 1940 seasons and bag limits, particularly on the open season for both male and female deer. During the meeting the activities committee reported that during the summer the group held their second annual banquet and boxing show. The boxing show sponsored as a conservation benefit featured 8 bouts between amateur boxers of Crawford County.

WOODCHUCK HUNTERS WARNED

Due to the great many serious and sometimes fatal accidents that occur during the woodchuck hunting season, the Game Commission once more appeals to the "Whistle pig" hunters to wear something bright red. The hunter who conceals himself in a brush pile minus a red cap or bandanna is betting his life against the cost of a ten cent handkerchief.

Unless the number of groundhog hunting accidents is drastically reduced, it may become necessary to have laws enacted imposing a penalty for failure of the persons hunting to take this simple precaution of wearing RED to safeguard their own lives.

"Within approximately 18 miles of my run, of which about 50% is mountain road, on the second day of August, I counted 9 house cats killed on the highway and only one small cottontail rabbit. In addition to the 9/10 of a clean score above I myself scored a hit, accidentally hitting and crippling a small mongrel dog chasing a rabbit across the highway and eventually I had to do him out of his misery."—Deputy Game Protector G. W. Clark, Schuylkill County.

The 1700 members of the Crawford County Branch of the Sportsmen's Council have offered their services to the U. S. Government to be used in whatever way it desires in combatting un-American activities. A copy of the resolution was mailed to the Federal Bureau of Investigation.

"John Zeigler, Forest Ranger, was driving along when he heard a shuffle in the bushes at the side of the road. He investigated and found a Red-tailed Hawk eating a rattlesnake which it had killed. That the bird killed the snake was evidenced by the fresh marks of its talons in the snake's head."—Charles Long, Fish Warden, Perry County.

"CCC Workers in Perry County reported seeing a Red-shouldered Hawk in combat with a black snake. In this case, the blacksnake was getting the best of the argument. It had two of its coils wrapped tightly around the hawk — so tightly in fact that the bird's tongue was hanging out." — Charles Long, Fish Warden, Perry County.

TAXIDERMY EXAMINATION

The next Taxidermy Examination will be held at the offices of the Commission, Harrisburg, September 24, by the Taxidermy Board, the personnel of which is: Reinhold L. Fricke, Preparator, Carnegie Museum, Pittsburgh; Harold T. Green, Curator, Academy of Natural Sciences, Philadelphia; and M. J. Kelly, Curator, Everhart Museum, Scranton. In the absence of Mr. Green, who will be in Alaska on a collecting expedition, his associate in the Academy of Natural Sciences, Mr. Frederick Schmid, will substitute for him.

Persons desiring to compete in the examination must come to Harrisburg at their own expense. Application to participate must be filed fifteen days prior to the date of the examination. The fee is $12.50, which will be applied against the $25.00 fee, provided the applicant passes. The fees paid by those not passing will be deposited in the Game Fund to help defray the expenses incurred in holding the examination. Applications may be secured from the office of the Game Commission at Harrisburg, upon request.

Game Laws and Seasons 1884

Note: The following digest of early Pennsylvania Game Laws was reprinted from the Farmers' Almanac for the year 1884, published by J. R. Weldin & Co., Pittsburgh:

PENNSYLVANIA GAME LAWS: The following is the portion of the game laws of the State especially applicable to this season of the year: No person shall kill or pursue any wild deer, save only between the 1st of October and the 31st of December of any year, under a penalty of $50. No person shall at any time kill any fawn when in his spotted coat, or have the fresh skin of such fawn in his possession, under a penalty of $50. Dogs pursuing deer or fawn can be killed by any person, and the owner of such dog shall be liable to a fine of $10 for each deer killed by such dog, except in Clinton, Centre, Fayette, Lycoming, Luzerne, Schuylkill, Union and Wyoming Counties. No person shall kill or have in possession after being killed, any gray, black or fox squirrels between January 1st and September 1st—penalty, $5 for each squirrel. Hare and rabbit, between January 1st and November 1st—penalty, $5 for each rabbit. Wild turkey, between January 1st and October 15th—penalty, $10 for each turkey.

Upland or grass plover, between July 1st and July 15th—penalty, $10 for each plover. Woodcock, between January 1st and July 4th—penalty, $10 for each woodcock. Quail or partridge, between January 1st and October 15th—penalty, $10 for each quail. Ruffed grouse or pheasant, between January 1st and October 1st—penalty, $10 for each pheasant. No person shall, at any time, kill or take any turkey, grouse or pheasant, quail or partridge, or woodcock, by means of any blind torchlight, trap, snare, net or device whatever, under a penalty of $10 for each bird. No person shall hunt or permit the hunting of hares or rabbits with ferrets, under a penalty of $10 for each rabbit caught and killed by such means. It is illegal to kill, trap, or expose for sale or have in possession after having been killed, any night hawk, whipporwill, sparrow, thrush, finch, martin, swallow, woodpecker, flicker, robin, oriole, red bird, cedar bird, cat bird, blue bird, tanger, or any other insectivorous bird, under a penalty of $5 for each bird.

No person shall rob or destroy the eggs or nests of any wild birds whatsoever (only predatory birds such as are destructive of game or insectivorous birds) under a penalty of $10. No person shall take, kill or disturb wild pigeons while on nesting grounds, under a penalty of $20. No person not a citizen of Pennsylvania may net or trap wild pigeons in any county unless he shall have taken out a license from the Treasurer of said county, and pay there the sum of $50 for the use of the county. No person shall hunt pheasants during the night time, in any manner whatsoever, under a penalty of $10 for each offense. There shall be no shooting, hunting, or fishing on Sunday, under a penalty of $25.

OFFICIAL 1940 OPEN SEASONS AND BAG LIMITS

(AS FIXED BY GAME COMMISSION AT MEETING OF JULY 11, 1940).

Open season includes both dates given, Sundays excepted for game. **On November 1 no hunting of any kind before 9 A. M.** With this exception, shooting hours daily are 7 A. M. to 5 P. M., except from July 1 to September 30 inclusive 6 A. M. to 7:30 P. M., E. S. T. Traps may not be set before 7 A. M. on the first day of the seasons for trapping in open counties. Raccoons may be hunted at night with a noon-to-noon daily limit.

UPLAND GAME (Small game possession limit three days' bag)	BAG LIMITS Day	BAG LIMITS Season	SEASONS Open	SEASONS Close
Woodchucks (Groundhogs)	4	Unlimited	July 1	Sept. 30
Ruffed Grouse	2	10	Nov. 1	Nov. 30
Quail, Bobwhite	5	15		
Hungarian Partridges (3 counties only)*	2	6		
Wild Turkey (See 8 counties closed below)*	1	1		
Ringneck Pheasants, males only	2	12		
Grackles (commonly called Blackbirds)	Unlimited			
Rabbits, Cottontail	4	20		
Squirrels, Gray, Black and Fox Combined kinds	6	20		
Squirrels, Red	Unlimited		Nov. 1	Sept. 30, 1941
Raccoons, all counties by individual or hunting party	1	15	Nov. 1	Dec. 31
Raccoons, by traps (21 counties closed below)*		15	Nov. 1	Dec. 31
Bear, over one year old by individual (See 10 counties closed below)*	1	1	Nov. 18	Nov. 21
Bear, over one year old by hunting party of five or more*	2	2		
Deer, both sexes, **except those with only a visible spike antler or antlers without points**	1	1	Dec. 2	Dec. 14
Deer, as above, by hunting party of 6 or more	6	6		

NO OPEN SEASON—Chukar Partridges, Sharp-tailed Grouse, Doves, Varying Hares (Snowshoe Rabbits), Deer with only a visible spike antler or antlers without points, Elk and Cub Bears.

FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates).

Minks	Unlimited	Nov. 1	Jan. 31, 1941
Otters (By traps only, in 6 counties)*	4	Nov. 1	Jan. 31, 1941
Muskrats (By traps only)	Unlimited	Dec. 1	Dec. 31
Beavers (Traps only; 27 counties closed)*	3	Mar. 1	Mar. 15, 1941
Opossums and Skunks	Unprotected	until	Sept. 30, 1941

*SPECIAL COUNTY REGULATIONS

FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates).

HUNGARIAN PARTRIDGES—Hungarian Partridges may be killed only in the counties of Lycoming, Montour and Northumberland.

TURKEY—No Turkey season in Cameron, Clarion, Elk, Forest, Jefferson, McKean, Potter and Warren Counties.

RACCOON TRAPPING—No Raccoon trapping in Beaver, Berks, Bucks, Butler, Cambria, Carbon, Chester, Dauphin, Delaware, Lancaster, Lawrence, Lebanon, Lehigh, Mercer, Montgomery, Northampton, Northumberland, Philadelphia, Schuylkill, Snyder and York Counties.

BEAR—No Bear season in Adams, Bedford, Blair, Cumberland, Franklin, Fulton, Huntingdon, Juniata, Mifflin and Perry Counties.

OTTER TRAPPING—Otter trapping only in Lackawanna, Monroe, Pike, Susquehanna, Wayne and Wyoming Counties.

BEAVER TRAPPING—Beaver trapping in all counties except Armstrong, Beaver, Bradford, Cambria, Cameron, Carbon, Centre, Clearfield, Columbia, Fayette, Greene, Indiana, Jefferson, Lycoming, McKean, Montour, Northumberland, Potter, Schuylkill, Snyder, Somerset, Sullivan, Tioga, Union, Washington, Westmoreland and Wyoming. One person may set and tend 10 traps only.

SNARES—Snares without springpoles may be used for taking predators only in Cameron, Clarion, Clinton, Elk, Forest, McKean, Pike, Potter, Susquehanna, Warren, Wayne and Wyoming Counties between December 16 and March 31, 1941.

FEDERAL SEASONS MIGRATORY GAME BIRDS

	DAILY BAG LIMITS	1940 OPEN SEASON (Sundays Excepted)
Rails and Gallinules (except Sora and Coot), combined kinds	15	Sept. 1-Nov. 30
Sora	15	
Woodcock	4	Oct. 16-Oct. 30
Wild Ducks (except Wood Ducks)	10*	Oct. 16-Dec. 14
Wild Geese (combined kinds)	3	
Snipe, Wilson's (Jacksnipe)	15	
Coots (Mudhens)	25	

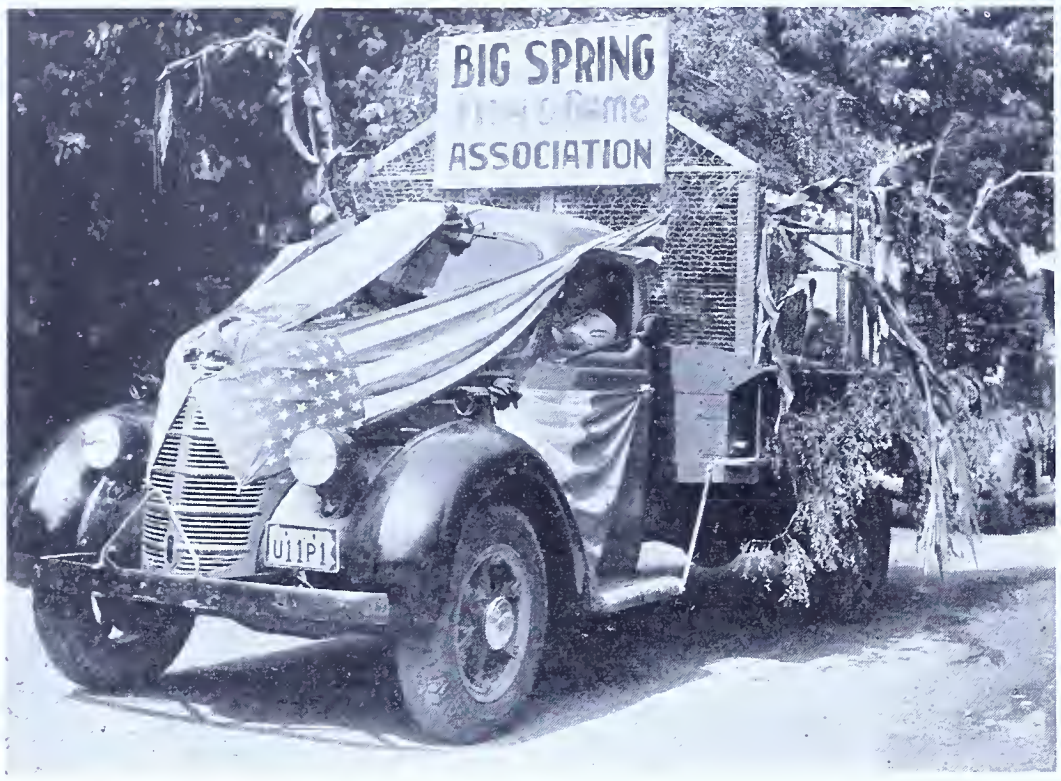
NO OPEN SEASON—Ross's Geese, Wood Ducks and Swans. Magazine shotguns must be plugged to 3 shots.

SHOOTING HOURS—(Standard Time) Ducks, Geese and Coots, Sunrise to 4 P. M.; Rails and Gallinules, 7 A. M. to 5 P. M., except in Tidal Marsh Areas Sunrise to Sunset; Woodcock and Snipe, 7 A. M. to 5 P. M. EXCEPTION: No hunting of any kind before 9 A. M. November 1.

*In the daily duck limit only 3 Canvasbacks, Redheads, Buffleheads or Ruddy Ducks, or these combined species, may be taken. Possession limit: Ducks, Geese and Woodcock, twice the daily bag; other species daily bag only. Possession lawful 20 days after season.

NOTE: See posters in Post Offices, or write Game Commission, Harrisburg, Pa., for complete regulations and methods of hunting migratory game birds.

CURRENT TOPICS



Members of the Big Spring Fish and Game Association took part in the Sesqui-Centennial at Newville, Pa., with a nice float displaying pheasants and wild turkeys.

In the Biological Survey's Mammal Laboratory in Washington are 96,787 rodents (squirrels, pocket gopers, mice, rats, etc.); 20,108 flesh-eating mammals (bears, weasels, wolves, cats, etc.); 7,554 moles and shrews; 5,697 hares, rabbits, and pikas; 3,870 bats; 1,869 even-toed group animals (pigs, deer, oxen, etc.); 523 opossums; 122 monkeys; 72 edentates, sloths, armadillos and anteaters; 9 tapirs and horses; 1 walrus; and 1 seal. The most valuable specimens in the collection are the type and tropotype which are the specimens upon which all scientists base their descriptions of the animals. Of the more than 2500 species and sub-species of mammals recognized in North America today 1,261 were described or first recognized by Biological Survey Workers.

Among these type specimens or first described animals is a tiny three inch shrew and a Kodiac bear, the largest species of all existing carnivors or meat eaters.

Since 1916 when the Survey was asked to undertake the control of predatory animals the collection of carnivors has increased until today the Bureau has 3,523 coyotes, 986 wolves and 540 mountain lions.

When hunting peccaries in Texas and Mexico, it is well to have a tree handy. This animal resembles a small pig, but it has anything but the pig's docility. He is as pugnacious as they come, and when traveling with the pack, fears nothing.

Recently a scientist was in Mexico on an exploration trip. Seeing a peccary he wounded it. The screams of the animal brought peccaries from all sides. Hastily the scientist scrambled up a tree holding on to his rifle. He was just in time, for the peccaries charged him. As the scientist perched in the tree, the peccaries continued to come, until there were literally hundreds.

In an attempt to draw attention to his plight, the scientist fired all his ammunition. Nothing daunted, the peccaries continued to storm the tree. They divided themselves into several groups. Some would wander off to feed, while others kept up the siege. Seemingly, at a given signal, those feeding would return to the tree, and relieve the guard. This kept up for 16 solid hours. The scientist had to lash himself to the tree to prevent falling out. Finally the animals gave up the vigil and went away, and the scientist climbed wearily and thankfully to the ground. The peccary not only eats cactus fruits but eats the flattened joints, spines and all.

Beavers, famed animal engineers on woodland and forest streams, are active soil and wildlife conservationists, according to a recent report received by the Fish and Wildlife Service, United States Department of the Interior, from the Utah Fish and Game Commission.

The State commission reported the results of a Federal Aid in Wildlife Restoration project in which 380 active beaver colonies on 975 square miles in the Utah Division of the Wasatch National Forest were observed for 22 months. The study included 1,505 beaver dams averaging 92 feet long and 2 feet high.

A new research laboratory which consolidates two units investigating wildlife food habits and methods for controlling predators and rodents has been established in Denver, Colorado, by the U. S. Fish and Wildlife Service Secretary of the Interior Harold L. Ickes announced recently.

NOTES FROM THE FIELD

"While Phil Gutshall, of Robertsdale, was walking on a path near his home one morning he saw a rabbit nest with four young ones in it. As he passed the nest the next day he saw only one bunny and a plump blacksnake. Upon killing the snake and opening it he found the other three rabbits, one still alive. Having a tame mother rabbit at home, he took the little fellow along and placed it in with the litter of tame ones. The tame mother licked the little newcomer off and has apparently accepted him into the family circle."—Game Protector Thomas F. Bell, Huntingdon County.

Mr. Isaac Long, of Harrisburg, writes to the effect that one of the players at the Carlisle Golf Club saw a crow alight, pick up one of the golf balls in its bill, and fly out of sight with it.

"Recently Mr. Ralph I. Buffet, of Berwyn, Chester County, was out crow hunting with his .22 rifle, which is equipped with a four power telescope sight. He saw a young crow in a tree, but there were so many leaves that he could not see it clearly enough to shoot. While he was watching it an old crow came along and, cawing furiously, circled the young crow. The youngster flew but only went a few feet, and lit on a dead branch in full view. Mr. Buffett moved his rifle and was sighting on the young bird which he saw clearly through his telescope sight. The old crow flew over towards the young one and, just before it reached it folded its wings and dove into the youngster knocking it off of the branch. Then, still cawing furiously, it fluttered right in back of the young one until it had herded it safely away from the vicinity of Mr. Buffett. The hunter was so interested in the performance that he did not shoot."

"Also, recently, I saw a groundhog in a field. Upon approaching him he ran, and on going over to the place where he had been for some time I found a nest containing 6 mallard eggs, one of which was broken, (freshly broken) and partly eaten. Do groundhogs break and eat eggs—or was it a coincidence that this animal was in the mallard's nest, and that one of the eggs was freshly broken and partly eaten?"

"The other day I found a large banded watersnake on the bank of a stream eating an 8 inch largemouth black bass that it apparently had caught, killed, and dragged up on the bank."—Wilbur P. Klapp, Jr., Deputy Game Protector, Chester County.

The collection of birds and mammals for the study of parasitic diseases frequently has its lighter moments, as illustrated by the events surrounding the taking of an immature robin in Philadelphia.

Behind the Botany Building at the University of Pennsylvania there is an artificial pond, filled with lilies, goldfish, turtles and bullfrogs. Miss Jean Lane, one of the assist-

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ants to the new director of the Department of Zoology, was recently strolling about this pond, enjoying its natural beauty. Suddenly through the trees over her head there appeared a bird, flapping laboriously, obviously in some difficulty. So great was its distress that it couldn't reach the opposite side of the pond and fell helplessly in among the lily pads.

Smack! Quick as lightning a huge frog grabbed the struggling bird and proceeded to swallow it. The screams of the victim and the general commotion were too much for Miss Lane. In a flash she had removed her shoes and stockings and started wading to the rescue. Sloshing through the plants and black muck of the pond she approached Mr. Bullfrog. He hesitated, eyed her for a moment and, deciding that discretion was the better part of valor, spit out the hapless bird and fled to the safety of the muddy depths. Miss Lane retrieved the bird, donned her hastily discarded footwear and came to my laboratory with her story, plus the evidence!

The bird proved to be an immature robin in an extreme state of emaciation. It had lost all ability to fly and was in desperate straits. Ministrations were to no avail and the bird died shortly. On post mortem examination it was found to be in fairly good shape except for its intestine. From the gizzard for some distance backward, the lining of the gut was very much eroded and severely diseased. The robin had been killed by a parasite which is similar to, though not identical with, that which causes "white diarrhea" (Coccidiosis) in chickens. This particular one has the scientific name *Isospora* and may prove on further study to be new to science.—Prof. Robert M. Stabler.

In my yard I have a Fish Pond which is inhabited by the usual things such as fish, snails, tadpoles and a frog which I call Leaping Lena.

Two weeks ago I was sitting near the pool when I noticed a sparrow approach either to drink or wash itself. All of a sudden the sparrow was fluttering and carrying on in a high manner. Upon examination of the cause of the rumpus, I found that Leaping Lena had caught the sparrow and had partially swallowed it. About a minute had lapsed when the frog emerged to carry the victim to the edge of the pool. This makes a total of five sparrows Leaping Lena has thus disposed of.

It is interesting to note that the frog was taken from a stream in this vicinity the past summer. While he was very shy at first he soon submitted to my kind treatment so that now I may pet him at any time — which he thoroughly enjoys.

This little incident has me very much puzzled and you may be assured that I will consult the proper reference books to find out more of his habits. — Abram Hershey, Secretary, Lititz Sportsmen's Association.

MIGRATORY BIRD PROTECTION

By RAYMOND J. HENNEY, LL. B.

THE law under which migratory birds are protected is particularly interesting as the fall shooting season on migratory waterfowl approaches, and it is of peculiar interest from a legal standpoint.

Seldom is conservation law predicted upon international treaties and fortified by a learned decision of the United States Supreme Court as in this instance.

In 1916, the United States negotiated a treaty with Great Britain for the protection of migratory game, non-game and insectivorous birds throughout the United States and Canada. Under the terms of the treaty, continuous protection was afforded to migratory non-game and insectivorous birds and partial protection to the migratory game birds in that it was solemnly agreed that there would be no open season on these game birds anywhere in the United States and Canada between March 10 and September 1 in any year and that at no time would either country declare an open season of more than three and a half months. Certain other protective features were incorporated in the treaty as in the protection of nests and eggs and in the prohibition of inter-state or international transportation of birds illegally taken.

This treaty was entered into by authority of Section 2, Article 2 of the Constitution of the United States which gives to the President, with the advice and consent of two-thirds of the Senate, the right to make treaties.

Once the treaty was executed, it was necessary for Congress to provide legal machinery for the enforcement of the terms of the treaty, and under the Migratory Bird Treaty Act of July 3, 1918, the Congress proceeded to carry out the terms of the Nation's agreement with Great Britain.

Divested of legal phraseology, the Migratory Bird Treaty Act provided an absolute close season on all migratory birds, subject, however, to the right of the Secretary of Agriculture, with the approval of the President, to make rules and regulations providing for the hunting of migratory game birds which would not conflict with the treaty made with Great Britain.

This first attempt to regulate the taking of migratory birds by federal action was challenged in many states of the Union on the ground that it was an invasion of states' rights, and the question was carried to the United States Supreme Court where on April 19, 1920, the court upheld the constitutionality of the treaty and of the Migratory Bird Treaty Act in the case of the State of Missouri v. Ray P. Holland (252 U.S. 416). In that important decision, which laid the ground work for the uniform protection of migratory birds throughout the United States and Canada, the court discussed the question of states' rights from a constitutional standpoint in a masterful fashion.

The validity of the treaty and its enforcement act on the Canadian side was upheld by the Supreme Court of Prince Edward Island in 1920 in the decision rendered in the case of The King v. Russell C. Clark, and, therefore, the way was cleared for the international protection of migratory birds resulting from the untiring efforts of conservationists over many years.

This accomplishment, however, did not fully dispose of the migratory bird situation throughout the entire North American continent as many of the birds pass beyond the southern boundary of the United States to reach their winter feeding grounds.

Accordingly, on February 7, 1936, a treaty was entered into with the United Mexican States containing substantially the same terms as the treaty made twenty years before with the British Empire, and now, herefore, the migratory birds are under the uniform protection of three nations at all times during their passage from the frozen regions of the North to the southernmost boundary of Mexico.

The foregoing is the law in the case, so to speak, and when reference is made to "migratory bird laws" in discussing open seasons and shooting restrictions, both of which are the source of honest differences of opinion among sportsmen and others, it is the regulations promulgated by the Secretary of Agriculture and not the treaties or the statutory laws which are actually referred to.

The regulations which are promulgated by the Secretary of Agriculture do not necessarily bind the various states, as each state, within the limits of such regulations, may provide its own laws or regulations for the taking of migratory game birds so long as they do not conflict with the federal regulations. That is, the federal regulations provide the maximum open seasons, bag limits, etc., but any state may further restrict the hunting or taking of migratory game birds within its own borders if it so desires.

In Pennsylvania the Game Commission has the power to declare open seasons on migratory birds in accordance with the provisions of the federal regulations. As above stated, no state may grant shooting priviliges in excess of those permitted by the Secretary of Agriculture in his regulations.—Mass. Conservation Bulletin.

FEEDING SHELTERS

"Now is the time to construct feeding shelters. You will be surprised how easy this can be done just by rolling a few logs together or placing brush, already cut, so that it will form a shelter.

"Begin now to act as a keeper of your favorite game covers. You will get wonderful results next fall in game killed and the pleasure derived at this time will be worth your while.

"Do not dodge the issue. The way is clear and the results will pay you well for your efforts. Don't let someone else do your share of the work that is so vital to good hunting in the years to come.

"The day of the armchair sportsman is past. The time when you could put your guns away in the fall and forget about the game is past. If you want to reap a wonderful harvest next fall you must protect the game already in the field.

"We should be sportsmen every day of the year and not lose our identity as sportsmen just as soon as the season closes. Every red-blooded sportsman should feel it his duty to help his local game protector throughout the year, in the protection of our game and the rights of sportsmen. Last but not least don't forget the farmer; he will be feeding your game during the summer. Invite his friendship and pave the way for next fall when you will again get out the old gun and hie away to your favorite hunting grounds.

"Hunting has grown to be quite a business. You are a stock holder, so don't neglect your business. Neglect of duty now will hasten the day when you can sit in your den and recall the days you once enjoyed. The State will be shot out and the reason will be your lack of interest in the sport you now enjoy."—Russell McClellan, President, Jenner Rod & Gun Club, Jenner, Pa.

Bull, or male seals, often weigh as much as 500 pounds, while their mates seldom are heavier than 75 pounds. The bull needs his weight, however, because he often has as many as 100 wives, which he guards very jealously, beating off any other males who attempt to encroach on his "harem."

Young bulls, or "bachelors," are six years old before they begin to fight for a harem of their own. Narrow lanes are left between the established harems through which the "bachelors" are allowed to travel. If they keep to these lanes, they are unmolested. Otherwise, they are attacked, often by more than one of the "bulls."

HONORED

T. BERNARD ELSESSER

The time to extol a man's virtues and to show your appreciation of what he has done for humanity is while he is living. At least the friends and associates of T. Bernard Elsesser, Managing Editor of the Gazette and Daily newspaper, of York, Pa., demonstrated their feelings in such a manner on July 6. The "boys" threw a bang-up party for comrade Elsesser in honor of his having just attained 50 years of service. Fifty years ago he started in as printer's "Devil" in the composing room of the Gazette. About 30 years ago he had worked himself up through the composing, advertising and editorial departments to become managing editor, a position he holds today. However, something that a lot of persons do not know about him is the fact that for many years he was the Secretary-Treasurer of the Pennsylvania State Sportsmen's Association for twelve years, the organization that was largely responsible for the establishment of the Pennsylvania Game Commission. At the same time he was Secretary-Treasurer of the "Westy Hogans", well known shooting organization of the east, for about 15 years, and for 35 years compiler of scores at the Grand American Handicap of the Amateur Trapshooting Association of North America. Hats off to a man who has done and is still doing a good job.

DOG REGISTRATION

At its annual meeting in Harrisburg on February last the State Federation of Sportsmen's Clubs went on record as endorsing a method of dog registration as proposed by Carl C. Rosser, of Williamsport. Subsequently we called attention to this plan, with an illustrated photograph, in one of the following issues of Game News. Now that the hunting season is approaching we again take pleasure in calling the matter to your attention. Not only hunting dog owners but other dog owners have manifested a great deal of interest in the safeguarding potentialities of such registration, and it is hoped that those who might have overlooked its possibilities will take advantage of such a golden opportunity to acquire such cheap insurance in case of the death or loss of their dog.

Only $1.25 is charged for the registration which is for the life of the dog, and applications can be secured by writing either Carl Rosser, R. D. 2, Williamsport, or Dr. C. A Mortimer, 194 S. Main Street, Wilkes-Barre The plan has succeeded so well in Mr. Rosser's section of the State that the habit in his county (Lycoming) now is that when a man buys a dog he looks in its right ear for a number to see if it is a stolen or a lost dog. If every dog owner gets behind this program it will only be a relatively few years before dog stealing is stopped.

As stated before, the same protection covers house dogs or pets, and State, as well as local authorities, will be notified if the dog is lost or stolen. The first man to have his dogs tattooed in the Pennsylvania Federation of Sportsmen's Clubs was Hon Samuel C. Castner, Member of the Game Commission, of Williamsport. Many other dog owners have registered since, and the more that continue to register the quicker the Federation will be able to help authorities catch a few of the professional dog thieves.

Deer inflict considerable damage during certain seasons to truck gardens, orchards, blueberry fields and cranberry bogs in Atlantic County, New Jersey. Since the animals follow rather definite routes to and from the fields, the New Jersey Game and Fish Commission, by leasing and planting appropriate food on small areas of non-agricultural land adjacent to these travel lanes, hopes to deflect the deer from the agricultural lands Twenty tracts throughout the county have been leased for five years, and will be closed to hunting for that period. As part of an approved development project, a tractor-drawn brush cutter will be utilized to remove existing cover, a necessary preliminary to the preparation of the soil for the planting of the crops. In addition to furnishing deer food and deflecting them from agricultural crops, the plots will benefit quail, rabbits and grouse.

FLUSHING BARS FOR GAME

The rainy June gave the game birds a "break" in that the weather kept farmers out of their fields and the birds were given an added period of grace to hatch their young, undisturbed by mowers. But reports to sportsmen of nesting quail and ringneck pheasants being "cut to pieces" by the blades of mowing machines make one wonder why farmers do not use the flushing bar recommended by the Game Commission. It is a simple device designed to be attached to the mower in advance of the whirring knives. When the dangling ropes of the flush bar strike the tall grass the mother bird is given an opportunity to take wing before the mower passes. The average farmer when confronted with this situation mows around the nest and thus saves the lives of countless birds. It should be unnecessary to repeat that the birds are among the best friends of the farmer. They devour hordes of insects against which the tiller of the soil is practically helpless.

The Game Commission publishes an interesting magazine called the Game News and frequently appeals for the use of flushing bars. Reading month after month of the life and habits of birds and animals of the field and forest develops a sympathetic understanding of the problems wildlife faces in its struggle for survival. Not long ago report was made of an abandoned Hungarian quail's nest containing nineteen eggs. Nearby a small patch of feathers of the adult bird told its own story.

The Game Commission has done and is doing a good job of educating the sportsmen in conservation. We can think of no better step in this direction than putting the Game News in more farm homes where it is sure to be read with interest and profit.—Public Opinion, Chambersburg, Pa.

STRENGTH FOR THE DAY

By Earl L. Douglass

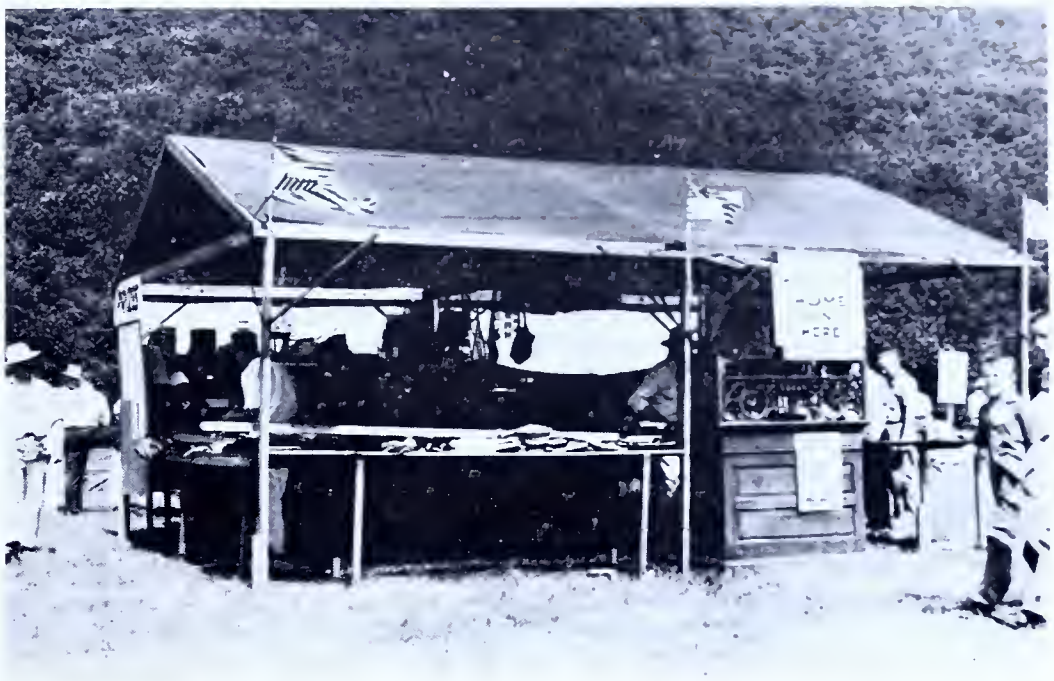
Wordsworth once wrote:
"The world is too much with us,
Late and soon, getting and spending
We lay waste our powers."

And Matthew Arnold said:
"We see all sights from pole to pole
And glance and nod and hurry by
And never once possess our soul,
Until we die."

When we exceed the speed limit on the highway, the motorcycle policeman draws us over to the side of the road and his first words generally are, "What's the hurry, Mister?" Many of us are exceeding the speed limit of life's highway every day, and the motorcycle policeman who stop people on that highway are named Nervous Breakdown, Trouble, Reverses. Stop yourself before things go that far and ask yourself the simple question, "What's the hurry, Mister?"

The idea that the faster we go the more we get out of life is a heresy which needs to be disavowed by every man of good will and good sense.

Stop glancing and nodding at life as you hurry by; stop for a while and get to know yourself—or better still, get to know the members of your family and your friends. Hurry takes us only one day nearer the grave and brings neither the wisdom of the world nor the wisdom of heaven into the orbit of our life.



Headquarters Booth at the Lycoming County Sportsmen's 1940 Picnic.

General view of the hundreds who attended the large outdoor gathering.

Archery came in for its fair share of attention.

THE GREAT OUTDOORS

By Harris G. Breth

LAST winter, hundreds of sportsmen and sportsmen's clubs did yeoman service to wildlife in their various enterprises to feed game and assist in through the starvation period. Besides the 2,000-strong Allegheny County Sportsmen's League caravan which pourneyed to three upland counteis, Elk, Cameron and Jefferson, and cooperated with the organizations there in cutting brush and providing deer forage, individuals throughout the state carried feed and grain on their shoulders deep into the woods. Clubs sponsored local projects with the same purpose. Starving wildlife refugees got a break.

From information reported from sections all over the state as well as from contacting others here and there in scattered districts, this grand work seems to have caught the imagination of devotees of the out-of-doors. Not only men, but women and youngsters joined in the crusade. I have an unforgettable letter from an aged widow who shared her small pittance with a covey of quail. She would buy grain enough for them to last until her next remittance before she bought her own rations.

Feeding Problem Serious

There is no doubt in any sportsman's mind who knows the struggle deer, grouse, quail and pheasants in particular have to get through our wintry season that each year the feeding problem is always serious. The Game Commission has recognized it for years, and much of their annual program is concentrated on game food and cover development.

Durnig the past two years alone millions of food-producing shrubs and vines have been planted. Thousands of feeding shelters, retreats and other covers for wildlife have been constructed.

One of the most important phases of the Commission's program is the planting of the gome food plot mixture of grain. Much of this grain has been passed out to sportsmen's organizations and others who have made good use of it, and today acres and acres of this excellent forage is flourishing to provide food this winter and in years to come. In fact, more than 16 tons of it have been planted. More will be available next year, and it is hoped, annually for this work.

Amazing as the strides are that have been made, when you consider the vast backlog of game that is "out there" to be fed, the surface has only been scratched. Each year the hunters take from five to seven million pieces of game, so you can get a fair idea of the millions remaining. The degree in which the remaining stock comes through the winters is almost an exact gauge of the amount that will be available for hunting the following year. Take quail. Once a winter comes along and covers the countryside under snow several feet deep, followed by sharp, zero temperatures, and few thaws, quail perish.

Now Is the Time

All this leads up to something. Sportsmen and sportsmen's clubs who conducted feeding projects last year need not wait until January, February and March to do their works of mercy. They can do it now. And in a way that does not require the hard, weary labor of long carries through deep snow, nor long expeditions although most sportsmen consider most of their past work interesting and enjoyable, and not laborious drudgery.

This is harvest time. And over Pennsylvania's great expanse are legions of farms. These farms, with mighty few exceptions, have buckwheat fields, corn fields and other grains ideal for game food. If a concentrated effort were made to contact a great number of these farmers with the idea in mind of leaving a few rows of this, or a corner of that kind of grain stand without harvesting it, the loss to the farmer would be small and the gain to wildlife tremendous.

It is true the treasuries of sportsmen's organiaztions are generally small in reserves, but for very few dollars it is surprising how much standing grain can be purchased. Particularly in hard-to-harvest corners, and along fence rows, and growing plots farthest away from the farm buildings.

Boon to Wildlife

And not only clubs but persons interested in doing something for our wildlife refugees to come this winter will find a couple of small investments in standing grain with farmer friends will add up to considerable "saved" wildlife. The price of leaving a few unplucked corn stalks in the corner of a field is not very much.

The advantage of this type of feeding now is that young game stock especially will have food available to make them more healthy and give them more resistance to withstand the ravages of cold weather. And the majority of such food will not be too widely used up before it can do the most good because of the natural food still exiisting in the wods in the fall. Not until the forest mast is gone will wildlife seek and use it, but it will certainly need it then. Of course, in some places some of these feeding stations will be subject to concentrated attention, but not the majority, by far.

The work of feeding our tremendous stock of wildlife in this state will sometime be organized on a vast scale, we hope. It has to be, and the Game Commission is well on the road. But the end is still far ahead. Until then, for better hunting, the more effort single individuals and clubs put forth in supplementing wildlife feeding, by planting food plots, by getting farmers to leave grain in their fields, by winter expeditions, it naturally follows the more game can survive to provide better sport and replensh hunting areas.

FOX HUNTING NOTES

« « By W. NEWBOLD ELY, M. F. H.

A Nashville publishing colleague was honoring our lares and penates reecntly reminding us of the trained fox which Mr. Hart has there which guards his chickens! All hunt secretaries should bring this in breezily when called to settle the next poultry damage claim.

Down in Rome, Georgia, famous for rayon and Mussolini's wolf dairy statue that old song and dance team—Romulus and Remus—the local paper tells not only about the town hauling down the Duce's present but of the Georgia gent who says the red fox is worth five bucks an acre to the farmer, referring not to a deer herd but the currency of the realm. Mr. Roquemore speaks of how Reynard "will dig up moles, field mice, rats and other such crop destroyers"—yet in bird experiments a certain section "has been well supplied with food, and the fox has been kept out—and yet the birds have failed to increase; sometimes they have actually oeclined in numbers despite this protection." They ask the reason so we'll give it. The Balance of Nature has been disturbed. Just as with civilization's extreme measures towards forest fires. In the old days they raged periodically. Then we heard that they destroyed all wildlife. Now "some of America's foremost authorities on quail will tell you that the systematic burning of the woods and fields is not only advisable, but essential if birds are to be raised in quantity.

It is not the intention of this department to lecture generally, but one of England's greatest fox hunters recently had something to say in their venerable English paper, HORSE AND HOUND which should be taken to heart by every American whether he ever followed hounds or not. "It is easy to attach blame and to condemn others for letting us down; but first let us examine urselves—'Have we not asked for this?' Have we, during all the time that Germany was preparing, taken any thought at all for preparing ourselvces? Have we flocked to join the Army? Have we taken any interest in our politics and sent the right men to represent us in our Government? No, I can answer these questions very easily. We have not cared a little bit, the most of us, what happened at all to any one but ourselves. Our God was, so to speak, our belly. All we thought of was money, pleasure, possessions, and a good time. We demanded this to the exclusion of all else. So to remain in power our politicians pandered to our demands for more of everything, especially leisure. Whilst Germany armed, and rearmed, we looked on and closed our eyes to a sight so unpalatable and enjoyed ourselves the more and more again. Now the greatest, the most ruthless, and the most powerful army that the world has ever seen is at our door, and over our heads, in the seas around our coast, are his deadly weapons of attack. To whom the blame? The answer is you and me. The fault is ours and ours alone. Let us arise now—and put it right before it is too late—now, at once, and all of us."

This foxhunter wrote these words this spring in England about the English. But how carefully we should read them in America this summer.

Recent Developments in the Land Purchase Program

By W. Gard. Conklin

AT a meeting of the Commission on July 11, 1940, 42 State Game Land offers were considered and acted upon. The 42 offers comprised a total of 24,353 acres for which $90,743.40 was asked.

Included in the offers was a generous gift by former Judge D. M. Miller for 64 acres in Allegheny County, which the Commission accepted with gratitude.

Also included was a tract of 736.6 acres in Lebanon County offered by the Department of Military Affairs. This tract, part of the former Mt. Gretna Military Reservation, had been set apart for the construction of a maximum security prison, but the plan was abandoned. It connects with State Game Lands No. 145 which the Commission purchased from the Department of Military Affairs in 1938. The Commission agreed to purchase this tract after the Department of Military Affairs secures a release of all rights to it granted in connection with the now abandoned prison proposition.

Twenty-three land purchase offers, involving 8,726.8 acres, in 13 counties were unconditionally accepted, and purchase contracts were promptly entered into.

Counter offers for two tracts comprising 2,750 acres were made, conditional on the owners agreeing by July 25, to sell at the specified lower price per acre. One of these counter offers for 2,350 acres was promptly agreed to and a purchase contract entered into. The other one was not agreed to.

Seven offers for 4,562.9 acres were rejected, and action on 8 others for 7,512.7 acres was postponed.

The tracts accepted and for which purchase contracts have been entered into are here listed:

County	Owner	Acreage	Game Lands Adjacent to
Berks	The Farmers Bank & Trust Co.	223.0	New Project
Bradford	Stanley D. Barclay	1,684.0	S. G. L. No. 12
Bradford	Gonia Cowan	164.0	S. G. L. No. 36
Bucks	Anton Fink	3.0	S. G. L. No. 157
Cambria	J. Harrison Westover	2,350.0	New Project
Chester	Warwick Steel & Iron Breaking Co.	15.3	S. G. L. No. 43
Crawford	E. J. Jones, Executor	153.0	New Project
Crawford	E. J. Jones, Executor	492.0	New Project
Crawford	Heirs of Vella M. Payne	160.0	New Project
Jefferson	Logan L. Bond	183.0	S. G. L. No. 54
Lawrence	Mina F. Neal	80.0	S. G. L. No. 151
Mercer	Ezekiel L. Wilson	75.0	S. G. L. No. 151
Lawrence	Mrs. James Boozell	30.0	S. G. L. No. 151
Lawrence	R. J. Shaffer, Agent	102.8	New Project
Lawrence	Mr. Roland M. Blair	15.0	New Project
Lawrence	A. H. Stuart, et al	50.0	New Project
Lawrence	Harvey E. Martin, Agent	22.5	New Project
Mifflin	William J. Wagner	233.0	S. G. L. No. 107
Northumberland	Grand View Coal Company	2,775.0	New Project
Pike	Guy W. Moore, Receiver	1,037.0	S. G. L. No. 116
Warren	Francisco Torchia	352.8	S. G. L. No. 86
Warren	C. C. Johnson	150.0	S. G. L. No. 143
Warren	James F. Armbrust, et al	59.0	S. G. L. No. 143
Washington	Harmon Creek Coal Corporation	667.05	S. G. L. No. 117

Including the above mentioned tracts, there are a total of 47,000 acres under contract for purchase at this writing.

Tracts Recently Conveyed

Since the report in the "Game News" of July, 1940, page 16, title was secured for 19 tracts, in 5 counties for a total of 2,560.70 acres. These 19 tracts are listed below, including the serial number of the State Game Lands of which they either became a part, or were designated. The acquisition of these lands brought the aggregate area of State Game Lands thus far conveyed to 639,241.58 acres.

County	Grantor	Acreage	State Game Land
Bedford	B. F. Madore, Trustee	162.3	S. G. L. No. 49
Bedford	Jesse E. Smith	163.4	S. G. L. No. 49
Bedford	Edward E. Mills	89.3	S. G. L. No. 49
Bedford	Julia Goodrich	55.7	S. G. L. No. 49
Bedford	Walter H. Clark	194.1	S. G. L. No. 49
Bedford	Francis Hall	108.8	S. G. L. No. 49
Bedford	William M. May	14.8	S. G. L. No. 49
Bedford	John W. Miller	113.8	S. G. L. No. 73
Bedford	Solomon B. Burket	208.8	S. G. L. No. 73
Bedford	B. Scott Gordon	128.6	S. G. L. No. 49
Bedford	William R. May	140.2	S. G. L. No. 49
Bradford	James W. English	101.7	S. G. L. No. 36
Bradford	Weston Abrams	90.9	S. G L. No. 142
Crawford	Harrietta Altenburg	152.5	S. G. L. No. 122
Fulton	Calvin Beatty	250.7	S. G. L. No. 49
Fulton	Guy Crawford	53.5	S. G. L. No. 49
Fulton	Viola McKee	41.9	S. G. L. No. 128
Tioga	Lillie E. Chance	299.4	S. G. L. No. 37
Tioga	John Starkey Estate	190.3	S. G. L. No. 37

Future Land Purchase Policy

The Commission at its July meeting considered the policy which should be observed in connection with the land purchase program, and agreed in the future to try to confine its purchases to:

(a) Lands necessary to straighten out the boundary lines of present holdings.

(b) To privately owned tracts constituting interiors within present holdings.

(e) To lands in agricultural territory in counties where State Game Lands holdings are below the average holdings of other counties, but not less than 150 acres in a contiguous area will be acquired.

The Commission decided that no land offers should be submitted to it for consideration and action for the following six month period (i. e., until the January 1941 meeting), except offers for tracts comprising interior holdings, or those required to straighten out the boundary lines of present holdings. This action was taken to give the Division of Lands and opportunity to get caught up on its title and boundary survey work.

In the July issue of "Game News", under the individuals who purchased the game food mixture, we omitted the North Butler County Hunting and Fishing Club. This club purchased and distributed 200 pounds of the mixture, and a survey recently made shows it is thriving for the most part, some even having been consumed by deer.

The fifth annual Field Trials, sponsored by Shenango Valley Chapter of the Western Reserve Fish and Game Protective Association, will be held at the new club grounds one mile west of Clarksville, Penna., Saturday, Sept. 14, 1940.

Skeet, trap, rifle, archery and casting contests will be held during the day.

"On July 7, 1940 while Mr. Ralph Brown of Honesdale had his automobile parked along the highway on State Game Lands No. 159 near Tanners Falls, a large bear broke one of the rear windows, presumably to get some fruit which was on the rear seat."—Game Protector Maynard R. Miller, Wayne County.

THE EDUCATOR'S PLACE IN CONSERVATION

Continued from Page 14

(14) A lack of the close cooperation necessary because of petty jealousies because a personal choice of idea is discarded to concentrate on a more imperative local need;

(15) A lack of leadership and financial aid because of insufficient time and selfishness;

(16) And a lack of understanding that the youth of America has his eyes on every adult who is setting the pattern for them to follow.

Some of the educational policies instituted by Jefferson were the "freedom of mind", and the "equality of opportunity." When we give the youth of America the opportunity to learn the true relationship between animal and plant life, between plant life and soil, between soil and water, between natural resources and humanity, between destruction and conservation, then we will have freedom of mind and equality of opportunity.

JACK MINER'S BIRD SANCTUARY

Continued from Page 5

A bird's-eye view of one of Jack Miner's ponds from his observation tower. Notice the evergreen trees which surround the ponds. Several thousand trees have been planted on the Miner Game Refuge which act as a windbreak as well as a place for the song and insectivorous birds to nest.

this summer. Next fall they will go south to the United States and we shall start hearing of them being shot there during the hunting season at points between the Mississippi and the Atlantic Coast.

In plain words, we have provided a place of safety for a breeding stock, and our banding records show definitely who it is that benefits from our sanctuary. The 5,000 or 10,000 that stay all winter are joined, both spring and fall, by a great floating population of from 50,000 to 100,000. This has been going on since 1904, therefore it is virtually impossible for anyone to make any sane estimate of the value of the sanctuary over the period of nearly half a century.

Jack Miner's Needs and Future Plans

Jack Miner comes from a poor family and is not a wealthy man. Thirty-odd years ago, when the birds began to come to his place in numbers, he had to have feed for them. The more that came the more feed he had to provide. His business was the making of brick and drain-tile. (And, by the way, it was because of having excavated clay to make this product that there were parts of his farm he could flood and so provide ponds for the waterfowl.) He did not make enough money out of this little, one-horse business to suport his family as he would have liked to support it much less feed all the birds that came to him.

Thirty years ago, in 1910, they were coming in what we then considered such great numbers that we had to have financial aid. Father began giving lectures and charging a fee of five or ten dollars. His story was so interesting and novel, and attracted such crowds, that it was not uncommon for him to receive as high as $500.00 a night. As a public speaker he had the satisfaction of filling the largest auditoriums in both the United States and Canada, and appeared on one program with no less a personage than ex-President Herbert Hoover. Today, among his best friends are such outstanding conservationists as Seth Gordon, Senator Frederic Walcott, John M. Phillips, and other men whose names will go down in history.

He went on lecture tours to every State in the United States, to every Province in Canada, and on special trips to Newfoundland and Alaska. This was the means by which he raised funds to maintain and build up his sanctuary. One need only visit it today to see where and how the money was spent. And while these years were spent in lecture tours—the hardest kind of hard work, as anyone who knows will attest—in order to raise necessary funds, they unwittingly served another, and greater purpose. They made our people conservation-minded. Handling his mail, as I did, I know of thousands of sanctuaries and refuges that were started directly as a result of his example, to say nothing of the ones begun indirectly because of it. Today some of these are much superior in size and are taking care of more birds than his.

Again, his lecture tours gave father a continual insight, at first hand, into game conditions all over the continent. For illustration: He made seven trips in five years through all of western Canada which gave him first-hand knowledge of the drought stricken area which supplies the game for the Middle West. His lecture tour fees and, later, some Government assistance, carried the financial burden until five years ago.

In 1935 Jack Miner was seventy years of age. Travelling was beginning to make him age fast. So the family cancelled all future lecture tours and since then have made semi-annual financial appeals, asking people to mail him their checks to enable him to carry on. Checks came in at first. But in the last five years the men of Jack Miner's generation have passed on, and now he has to appeal to the next generation asking them to send him their checks to enable him to carry on this great international work of conservation. He will welcome any contribution made payable to him and sent to Kingsville, Ontario. With Canada engaged in a war which is not of his making or desire, his sanctuary is facing a financial crisis such as was never experienced before. The publications of your country, such as the Pennsylvania News, is cooperating fully in making Jack Miner's needs known, in the hope that readers will lend some of their financial support in this critical time.

Looking Into the Future

Jack Miner's friends, looking into the future, have had incorporated what is known as The Jack Miner Migratory Bird Foundation. It is incorporated as a philanthropic organization, (tax exempt) in the State of Michigan under the United States Philanthropic laws. In Canada it has been incorporated by a special Act of Parliament. The Union Guardian Trust Company of Detroit, Michigan, acts as depository for all trust funds bequeathed or donated to the Foundation. The idea is to try and raise a trust fund of one million dollars, by gift or bequest, with which to perpetuate and endow Jack Miner's Bird Sanctuary. Not as an historic spot. No. Far from it. But in order that his work of conservation of wildlife will be carried on.

Father and Mother have deeded their home and the sanctuary, free of debt, to the above mentioned Foundation as proof of their sincerity. Besides raising a trust fund of one million dollars, the Foundation is also desirous of raising another quarter million earmarked "to buy land surrounding the refuge to be used to raise feed for the birds and establish an international park."

Maintenance Money

However, until this trust fund receives enough bequests to bear interest to maintain the area, Jack Miner has to have money to carry on He, being unable to lecture any more, Canada being at war and his Government grant reduced nearly half, he has to rely on his friends. The late Dr. Henry VanDyke before he died wrote to Jack Miner and said:

> "Keep up the good work for God,
> humanity and the Birds."

I am happy to say that father has just passed his 75th year. He is very alert and active, planning for the next twenty-five years. But within the next few months he has to raise $15,000.00 to enable him to meet his 1940 expenses. Will you come to his aid by mailing your check to him and getting your friends and clubs to do likewise? And when making your will, remember a bequest to The Jack Miner Migratory Bird Foundation. It is hoped all will be as liberal as possible. If you are interested in seeing a continuous supply of game birds go into the United States, especially in the eastern half of North America, from Canada, where can your money be placed more effectively than at Jack Miner's? Jack Miner's activities are not new. They have spoken for themselves for nearly half a century.

"Come over into Macedonia and help us."

SOME MORE FOXY BUSINESS

Continued from Page 7

TABLE 1

Fox Population Trends in Pennsylvania During the Period 1933-34 to 1939-40

(According to Opinions of P. G. C. Field Officers, Fur-dealers, Fox Trappers and Hunters)

	1933-34			1934-35			1935-36			1936-37			1937-38			1938-39			1939-40		
	I*	D*	S*	I	D	S	I	D	S	I	D	S	I	D	S	I	D	S	I	D	S
										RED FOX											
No. of Opinions	10	17	25	16	25	23	99	43	92	127	48	117	195	51	132	283	66	114	317	81	117
%	19.2	32.7	48.1	25.0	39.0	36.0	42.3	18.4	39.3	43.4	16.5	40.1	51.6	13.5	34.9	61.1	14.3	24.6	61.6	15.7	22.7
Trend Unit			5.4		3.0		3.0			3.3			16.7			36.5			38.9		
										GRAY FOX											
No. of Opinions	20	11	10	30	35	25	93	52	78	122	59	109	183	69	127	248	78	133	291	88	126
%	48.7	26.8	24.5	33.3	38.9	27.8	42.2	23.3	34.5	42.0	20.3	37.7	48.2	18.2	33.6	54.0	17.0	29.0	57.6	17.4	25.0
Trend Unit	21.9				5.6		7.7			4.3			14.6			25.0			32.6		

* I—Increasing. D—Decreasing. S—Stationary.

TABLE 2 Counties in Pennsylvania Where Fox Kill is Heaviest (As of 1939-1940)

Red Fox (Hypothetical)		Gray Fox (Bounty Records)	
County	No. of Square miles for each Fox Killed	County	No. of Square miles for each Fox Killed
Greene	1.1	Clinton	1.4
Washington	1.1	Wayne	1.7
Bucks	1.4	Cameron	1.9
Chester	1.5	Mifflin	1.9
Wyoming	1.8	Bucks	2.2
Lebanon	1.8	Centre	2.3
Potter	2.0	Adams	2.5
Delaware	2.0	Juniata	2.6
Susquehanna	2.1	Union	2.6
Montgomery	2.2	Wyoming	2.6
Tioga	2.2	Susquehanna	2.7
Bradford	2.2	Dauphin	2.8
Lancaster	2.3	Pike	3.0
Warren	2.5	Huntingdon	3.0
Beaver	2.5	Carbon	3.1
Elk	2.6	Lycoming	3.1
Northampton	2.6	Clearfield	3.1
Berks	2.7	Somerset	3.2
Erie	2.9	Schuylkill	3.4
Huntingdon	3.0	Perry	3.4
Sullivan	3.0	Blair	3.5
Lehigh	3.4	Fayette	3.6
McKean	3.6	Lebanon	3.7
		Bedford	3.7
		Westmoreland	3.7
		Fulton	3.8

years 1937-38 and 1938-39. Trend pictures which have been prepared for each Game Commission Administrative Division present practically the same outlook as shown in Figure 2, which represents the entire State. However, certain Divisions show the dropping off more pronouncedly.

We are now ready to present the final step in this preliminary study to discover the status of our fox populations. In Figure 3 and Table 2 are shown those counties wherein the heaviest gray fox kills were made during the period from June 1, 1939 to May 30, 1940 inclusive. This figure and table also shows the counties which we tentatively believe contain the heaviest red fox populations.

The easiest way to compare the fox productivity of land areas of unequal size is to obtain take densities. This is what has been done in Table 2, in which is shown the number of square miles in which one red fox or one gray fox were taken. The average gray fox take density for the entire State in 1939-1940 was one for each 4.23 square miles. In 1938-39, one gray fox was taken for each 4.76 square miles; and in 1937-38 one to every 5.03 square miles.

As figures for the red fox kill by counties are not in existence, it was necessary first to obtain an indication of the proportion of red foxes to gray foxes for each county. For example, in Huntingdon County the red to gray fox proportion agreed upon was one to one. We knew from the bounty records that 305 gray foxes had been probated during 1939-40, therefore, a similar number of red foxes were taken. Of course there is always the come-back that nobody bothers to catch the red fox. At this time, we have 170 ratios for 67 counties. But for the sake of accuracy, it is necessary to obtain far more, so as to arrive at the consensus of opinion as to what the red to gray fox proportion is in each county.

The writer is willing to predict on the basis of the present set of ratios that about 3,000 red foxes will be probated during the period July 1, 1940 to June 30, 1941 from the 26 northern counties now open to bounty on the red fox.

After all these mathematics, consider the map of Pennsylvania (Fig. 3). Five counties, namely, Susquehanna, Wyoming, Huntingdon, Lebanon, and Bucks seem to be suffering from an unusual abundance of foxes. It may be that many of the other counties aren't so bad off after all!

The Gray Fox may be indigenous to this State in a greater sense than its Red Cousin.

PARTNERS OF THE TRAIL

« « By Jack Anderson

IT was autumn and my cabin steamed with the aroma blend of maple boughs and pine needles. I sat before a warm log-stove, pipe in hand, and across from me sat a grizzled oldster whose face was stamped and warped by myriad Pocono frosts and northeasters. "Well, the season's open tomorrow, Harvey," I said happily. I regarded the pot that steamed merrily on the stove with satisfaction. "That's my last batch of traps boiling now. All fixed, boiled and colored, and I'm rarin' to set them out."

Harvey was silent. His hard grey eyes were as unseeing as stone. His face was pale, the age-lines drooped more than usual. His mouth was grim-set, unyielding. He was wrapped in a strange, uncongenial imperviousness that was foreign to the man.

I had known Harvey Cushing for many years. I admired him as a jolly, carefree, outdoors-looving oldster, rich in experience and staunch as ever on the trail. Beneath his shaggy mop of grey hair reposed a thousand tricks to trap the fox, hunt the deer and hare, fish the wily trout. He knew every fur pocket for miles about, knew where the deer wintered, and in his years had searched out the trails used by every animal of the district. His was the wisdom of a child of nature.

For years Harvey and Dad Billings had been partners of the trail. Many a hound had bayed before their tread and to their appreciative, knowing ears had fallen countless yaps of foxes, drummings of grouse, blowings of deer. They were unwise to the wicked ways of civilization and their life and love lay in the unspoiled forest, in silence, in the glory of natural beauty. They said little to each other, but the tale of their friendship was unfolded by tender eyes, glowing expressions, friendly cooperation under all situations.

Partners of the trail—perhaps the greatest partnership of life. Battles together against the untamed elements of nature, experiences together of the thrill of the chase; sunsets together, storms together, nights by the fireside together. No business partnership, no urban friendship can match this deep friendliness of man and man—only life partnership with woman can match it.

Harvey had been ever good-humored, talkative, especially on the day before another trapping season. Dad Billings labored at a neighboring saw-mill and Harvey's customary duty was to get all in readiness to hit the trail.

"Legs feeling all right?" I ventured, seeking out a clue to Harvey's gloominess.

He nodded indifferently.

"I don't suppose the lumbago's got you again?"

He shook his tired head.

"Got the trap's all fixed and boiled?"

He shook his head again.

"You haven't! Harv, you're slipping; you're going on the trail tomorrow, I **know** that. You **couldn't** escape trapping fever. Anyway, I saw you and Dan mapping out your line."

He struggled slowly to his feet. He appeared tired, very tired. And sad. His eyes lost their hardness and gathered an aspect of loneliness, hopelessness. He opened the door and framed his slightly-stooped bulk in the doorway, against a background of majestic sun-flushed autum sky. As he half-turned in the doorway I thrilled at the sorrowful, ragged outline of his face. Without a word he lumbered wearily down the trail toward his cabin.

I remained with the thought: Time is fleeting. Harvey Cushing had bloomed, like a wilderness flower, and like the flower, had withered. He was as ancient as the dilapidated stake-and-rider fence that flanked the trail. And I recalled Dad Billings, and remembered his gaunt figure and drooping lines.

They were going. I was coming. Already I could out-track them, outlast them on the hunt. They were like old prizefighters whose spirit was willing but whose flesh was weak.

But still, they had mapped out a line. Could it be that at the last moment they had decided they couldn't quite make it? The mystery intrigued me.

Long before daylight I was up and about. I had nearly a hundred traps to stake out and needed an early start. My last garment to get into was an old mackinaw, a greasy and ill-smelling coat, but the memory of other year's catches lingered with it, and I was seized with trapping fever more violently than ever. When I swung down the trail, pancakes in my stomach and traps on my back, I felt light-hearted and gay. In the east the blackness had weakened into grey. The air was as sharp and bitter as frost.

The east was blood and rose when I neared Dad Billing's cabin. Opening days of trapping seasons past flashed before me as the cabin heaved into view. I had often seen Dad in the front of the cabin packing his huge Indian basket with traps and supplies. A pipe invariably had jutted from his mouth and there had always been a light in his eyes that revealed a joy not unlike that of a child on Christmas morning. He had been invariably garbed in a heavy wool coat and corduroy pants that were stuffed slovenly into a pair of high laced shoes. A hunting knife had been sheathed by his side, and a camp axe had dangled from his belt.

The cabin now looked lonely and destitute against the background of the sleeping forest. A thin column of smoke crept skyward from the chimney. I was seized with a strange emptiness, a vague uneasiness. I stared through the little cabin window. A sickly light burned inside. A man sat hunch-backed by an old shreddy couch. I lived in another world for several seconds, gripped by what my eyes beheld. As I turned down the trail that glowed now in red and gold, a sad thrill ran over me.

I realized now why Harvey Cushing would not hit the trail today. I realized why he would never again hit the trail. For it was he who sat in the lambent lantern-light. And a crude wreath hung on Dad Billing's cabin door.

THE FOUR HORSEMEN OF CONSERVATION

Continued from Page 11

maintaining a stock of Wildlife once it had been established. It is only within the last few years that a few of us have dared to suggest that much more game is produced naturally in nature's fields and forests than artificially by man. I have been cussed out of a meeting of sportsmen for suggesting that New York State might close up her game farms five years out of ten and still harvest about the same number of quail and of pheasants. I must admit I feel the same way about the importation of cottontails. For nature still remains the great producer.

Though starting at about the same time, the idea of establishing areas in which a seed stock of game might find refuge when the guns start popping was not given the standing of a panacea until about 1920. For the next fifteen years most sportsmen lived in the hope that game sufficient to restock entire states might spread from a sprinkling of such units over the countryside. Here again, while refuges certainly play their part, under any save specialized conditions, they do not give us the whole answer for which we are ever seeking.

The latest addition to this ever-growing group of Wildlife production ideas is the natural outgrowth of previous failures of much advertised cure-alls. Even as the microbe hunter has attracted the imagination of the man in the street to the field of medicine, so the fact-finders have sold the potentialities of Wildlife research to the sportsman. The day of producing Wildlife crops "by guess and by gosh" is rapidly giving way to the more prosaic but productive planning of the Wildlife Manager. We find ourselves caught in a maelstrom of new ideas and theories contradicting long-established beliefs. Such terms as environment, ecological reaction, biota, carrying capacity, range productivity and vulnerability to predation are becoming more widely used and well understood. Money in amounts unbelievable a few years ago is now being spent to "learn how" to make two pheasants grow where one grew before. Conservationists, eager as ever to embrane a new panacea, are pressing for answers to the thousand-and-one questions they have always wondered about.

They are gettting them. Good answers. Poor answers. Some half-baked; others uncorrelated; a few carefully digested. From the point of view of the research workers in this field it is encouraging to find them becoming less ready to answer when asked and more anxious to digest and integrate their findings in the light of other correlated studies. If they can just keep their names out of print and their faces away from such meetings as this until they feel reasonably certain that their findings will not be relegated to an unimportant corner by the new discoveries of the next research worker to study the same problem, they may yet justify the confidence the sportsman has so readily placed in them as game abundance prophets. If

they do not, a wiser group of men will turn away to the next cure-all produced by man's inventive genius.

In fact, there are already signs of a new one on the horizon. It is blessed by the potent name of conservation education. It differs from the others in that it does not of itself directly produce more Wildlife. It depends for its effectiveness upon its ability to instill into its believers an understanding and a vision of conservation practices strong enough to control their actions. Wherever conservation steps from the field of physical science into that of social science and of public relations there exists an opporunity for education to play a part second to none in productivity. I think it was Walt Whitman who said:

"There was a child went forth every day,
And the first object he look'd upon, that object he became,
And that object became part of him for the day or a certain part of the day,
Or for many years or stretching cycles of years.

The early lilacs became part of this child,
And grass and white and red morning-glories, and white and red clover, and the song of the phoebe-bird,
And the Third-month lambs and the sow's pink-faint litter, and the mare's foal and the cow's calf,
And the noisy brood of the barnyard or by the mire of the pond-side,

"And the apple-trees cover'd with blossoms and the fruit afterward, and wood-berries, and the commonest weeds by the road,

"And the schoolmistress that pass'd on her way to school,

"The village on the highland seen from afar, at sunset, the river between,
Shadows, aureola and mist, the light falling on roofs and gables of white or brown two miles off,

"These became part of that child who went forth every day, and who now goes, and will always go forth every day."

In the field of conservation education, all unnoticed by most of us, there is a struggle going on right now between those who believe in making the rod or the gun an excuse for many a pleasant day afield, and those who prefer to use but camera and binoculars. The weight of numbers is on the side of the so-called nature lover; the advantage of more active interest and organization lies with the users of rod and gun. Whichever wins carries with him the youth of tomorrow.

These, then, are the horses we as conservationists are riding. Grouped for ready reference, they are:

1. **Protection** of the seed stock and control of the harvest.
2. **Propagation**, either natural or artificial. Here we may include the operation of game farms and the restocking of coverts with wild-trapped species.
3. **Research** (the lead horse).
4. **Education**, to furnish the motive and inspiration for understanding action.

Wildlife management, of which we are hearing so much today, is nothing more than the proper hitching and teaming of these four horses that among them pull the conservation wagon. Alone or improperly hitched, due to the dominant enthusiasm of individuals or organizations for one or another of these horses, they may pull as much against as with each other.

Tomorrow's sportsmen will be vitally affected by the way you and I hook up today's horses.

PLANTING TREES FOR WILDLIFE

Continued from Page 3

In fact, I have often seen a hunter kill a squirrel in the act of burying a nut, pick up the carcass and start off in search of another tree, leaving the squirrel's nut, which would have meant another tree, unplanted beside the hole the animal had prepared.

Nut planting, however, is a simple matter for the sportsman hunting in the Fall, when ripe nuts drop from the tree. The only tool he needs in planting wanuts, butternuts, hickory and other nuts is a small garden trowel or a sharpened stick to make a hole four inches deep. If he lacks these, he can use his boot heel to drive the nuts into soft ground. Nut trees have tap roots and should be planted 60 feet apart in good deep soil, where they will not interfere with farming, preferably on the edge of woods or along country roads as both nut and fruit trees require sunshine to mature and produce nuts and fruit. Walnuts and butternuts have a hull which contains fertilizing elements so the green hull preferably should be left on the nut but crushed with the heel when planting. Hulled nuts will grow, but they should be planted in the Fall before they dry. If squirrels, the original nut planters, are likely to dig them up, place a stone or a piece of chicken wire over them, these should be removed in the Spring before the nuts sprout. Hulled nuts can also be planted in the Fall, stratified in boxes which must be exposed to the weather. Holes should be bored in the bottom of the box which should be sunk flush with the ground.

Place two inches of sandy loam on the bottom of the box, then place the nuts one inch apart on top, add another two inches of loam and a second row of nuts and cover with two inches of loam.

Trees can also be purchased from nurseries.

During the present depression many of our unemployed have gathered and sold nuts. Nut kernels have many uses, and are a delicious, valuable and wholesome food.

* "It takes 33 pounds of food to grow one pound of meat in a steer. Every pound of milk takes 5 pounds of food to produce. A pound of eggs takes twenty pounds of food for the hen. But it is reliably stated that one pound of walnut meats has the value of five pounds of eggs, nine and a half pounds of milk or four pounds of beef loin. Nuts are rich in proteins, oils and starches, one kind having more of one and less of another food element. Walnuts are rich in oils and proteins with less starch. Chestnuts have less oil and more starch. But a mixed nut, vegetable and cereal diet can readily be made complete with practically no meat. Nuts contain important vitamins also."

A farmer in Iowa recently paid off a large mortgage on his farm by selling the black walnut trees on his woodlot, realizing from $25.00 to $235.00 a tree. A curly black walnut tree from Kentucky sold for $3,500. A few years ago a movement was on foot to name the black walnut on account of its beauty and utility our national tree. Forty years ago, walnuts sold for 50 cents a bushel. Today they are worth $5.00 a bushel and hickory nuts are almost a thing of the past. Today walnut lumber is five times and hickory three times as valuable as the soft woods.

Many of us insure our lives for the benefit of our children. Why not plant a grove of nut trees for the benefit of posterity? For the value of these trees, both aesthetic and commercial, is unchallengable and in augmenting your possessions by planting them you will also have the joy of knowing you are providing food for the people and wildlife of the nation.

* Nut Growing—By Morris.

November Foods of Ringneck Pheasants and Bobwhites

Continued from Page 9

food for the following fall and winter. The food-patch mixture used for game birds in Pennsylvania is about the best for conditions there (fig. 2). Another excellent practice used by many farmers and by sportsmen working with farmers is to leave several rows of partly picked corn adjacent to known wintering coverts (fig. 3). This is often less trouble for a farmer than is the planting of a food-patch.

For both pheasants and bobwhites, it is best to provide food near woody coverts where it is known that birds like to winter. Sportsmen should contact their friends among the farmers and make arrangements to plant food-patches or leave strips of standing corn near good woody cover. Birds that winter in good condition will produce other birds that may be hunted for sport that fall.

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IT'S A BIG JOB!

By JOHN MOCK

Editor's Note: Our readers might be interested in knowing that all the work mentioned in Mr. Mock's account has been done by the use of W.P.A. labor, and that another W.P.A. project has been submitted and additional work of the same kind will be done on Game Lands No. 117. The same program is being carried on on a great percentage of other Game Lands by W.P.A. and other relief help. From 1500 to 1600 W.P.A. employees are working constantly on these lands to make them better areas for wildlife.

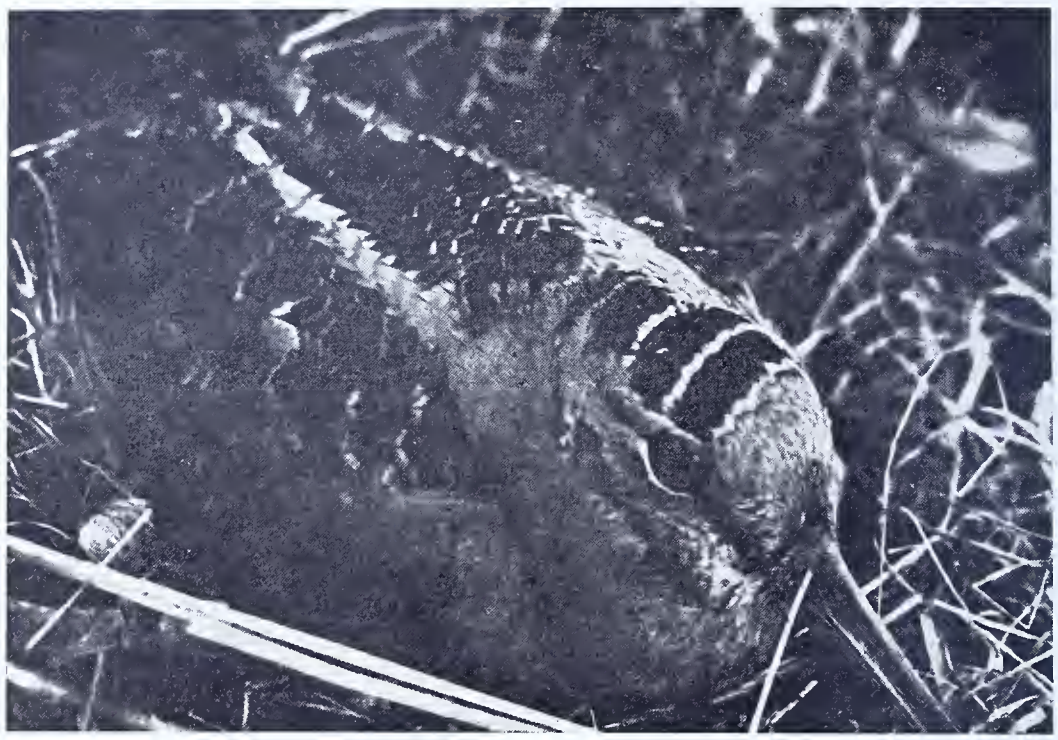

Photo by Barton L. Sharp

Woodcock on Nest.

WHAT goes on there?

It is surprising the amount of detail work involved in putting a piece of ground into operation as a State Game Land Project.

Some time ago an inspection of State Game Lands No. 117, located in Washington County, revealed the following undertakings:

Built three miles of red-dog road, 10 feet wide with a two-foot berm on either side. Built eight brick and stone culverts with iron casing drains. Walled up 18 springs and built one brick spring house. Repaired one wooden building and put stone foundations beneath it for use in storing timber and tools. Completed seven gates into the Game Lands. Constructed 11 dams, which ranged up to three feet in height. Installed 30 rabbit shelters and retreats, the material used being brush.

Planted 314,000 trees and shrubs. Cleaned out 18 additional springs. Built tool shed 24x 12 feet. Cut stones sufficient for half the construction of a 20x20-foot building. Mowed and grubbed 21 miles of boundary lines. Mowed and grubbed two miles of refuge lines. Put up 2000 new boundary line posters, 50 metal refuge signs and 300 cardboard posters. Built 500 boards for farm-game refuge projects from chestnut obtained from another refuge keeper. Transplanted 100 red osier shrubs and erected 11 poles for pole traps.

Plant Wildlife Foods

Getting away from the large refuges, which are more suitable for large game, of which there is little in Washington County, the refuges adopted have been of the same nature as those installed on the farm-game projects, being more adaptable to the game of the region insofar as cruising radius, food requirements, protection, outflow of surplus and other factors concerning rabbits, quail, pheasants and others of the small game group.

In the earlier days of its acquisition, State Game Lands No. 117 was planted with evergreens for cover purposes. Since that time more emphasis has been placed upon those considered wildlife foods and shrubs. Present plantings include dogwoods, panicled flowering and red osier. Hardwoods include hickory, walnut, butternut, hazelnut, white and rock oaks, Mulberry, sassafras and black gum, lespedeza, alfalfa, sweet, white and red clover, and soy beans are the legumes. Listed among the grains are field and sweet corn, kaffir corn, buckwheat, Pennsylvania food mixture and Stockman's No. 1. Shrubs include black elderberry, barberry, American privet, coral berry and black haws, along the streams.

Abandoned fields have been plowed to promote weed growth and other vegetation, while lime has been added where needed to sweeten the soil and natural fertilizers will be created through crop rotation.

A nursery has been established for the production of shrubs and transplants. Fire trails have been established over the entire area as needed. Clump plantings have been made for pheasants, in addition to dens for squirrels and raccoons.

Encourage Ground Growth

Selective cuttings are made from standing growths to promote better wildlife foods. Hawthorn and crabapple thickets will be thinned out. Elm and such other non-food-producing trees will be reduced in number. In dense growths "openings" will be made to encourage ground growth. "Dusting" spots will be created through the proper means. Apple trees are to be pruned.

"What goes on there?"

When the sportsmen learn of the many and varied undertakings which are required to create permanent wildlife habitat upon lands which have been abandoned and left to grow wild, or upon intensively cultivated lands which are barren of all suitable food and environment for wildlife, then will they realize that it takes time, money and effort to bring about the accomplishments which result in better sport afield.

COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA GAME COMMISSION
HARRISBURG, PENNA.

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OBEY THE LAW » » » HELP YOUR PROTECTOR

Stop the cheater by reporting his license number! Automobile license numbers will help too!

The vast majority of Pennsylvania's hunters are real sportsmen, and observe the law. They can help themselves by reporting promptly those who violate. (Use the list below:)

DISTRICT GAME PROTECTORS

COUNTY			Phone
Adams	Leo Bushman, 264 Baltimore St., Gettysburg		
Allegheny	R. A. Liphart, 334 E. 11th Ave., Homestead		1550
Armstrong	R. H. McKissick, 129 Rebecca St., Kittanning		785
Beaver	J. B. McGregor, 1099 Turnpike St., Beaver		1503
Bedford	John S Dittmar, Loysburg		7
Berks	Joseph Leiendecker, 18 Berks Place, Wyomissing	Reading	4-2713
Blair	C. C. Brennecke, 2520 21st Ave., Altoona		2-6974
Bradford	Rodman C. Case, 927 Main St., Towanda		337
Bucks	S. Earl Carpenter, 41 Taylor Ave., Doylestown		5168
Butler	Troy C. Burns, N. Main St. Extension, Butler		32100
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Cameron	Max N. Ostrum, 321 Third St., Emporium		4482
Carbon	W. C. Achey, 311 First St., Weatherly		4741
Centre	Thomas A. Mosier, 120 N. Spring St., Bellefonte		38
Chester	J. E. McCannon, 83 S. 5th Ave., Coatesville		191
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Dauphin	M. P. Motter, 4231 Elmerton Ave., Colonial Park	Harrisburg	55528
Delaware	B. J. Davis, 436 E Baltimore Ave., Media		295
Elk	E. L. Shields, Eshbach Road, St. Marys		5341
Erie	John G. Kennedy, 238 E. 22nd St., Erie		03-215
Fayette	T. T. Schafer, 16 Wilmington St., Uniontown		3794
Forest	Carl B. Benson, Tionesta		189
Franklin	Wm. W. Britton, 573 E. Catherine St., Chambersburg		195
Fulton	I. C. Baumgardner, S. 2nd St., McConnellsburg		22
Greene	J. F. Blair, 123 N. Richhill St., Waynesburg		267
Huntingdon	T. F. Bell, 407 16th St., Huntingdon		158
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Juniata	H. W. Fisher, 611 Washington Ave., Mifflintown		176
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Lancaster	J. M. Haverstick, 741 College Ave., Lancaster		5540
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York	A. C. Ganster, 520 Girard Ave., York		7434

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PLEASE REFER TO INSIDE OF COVER FOR ADDRESSES OF FIELD DIVISION SUPERVISORS.

The A B C's of Hunting

Always Be Carefull

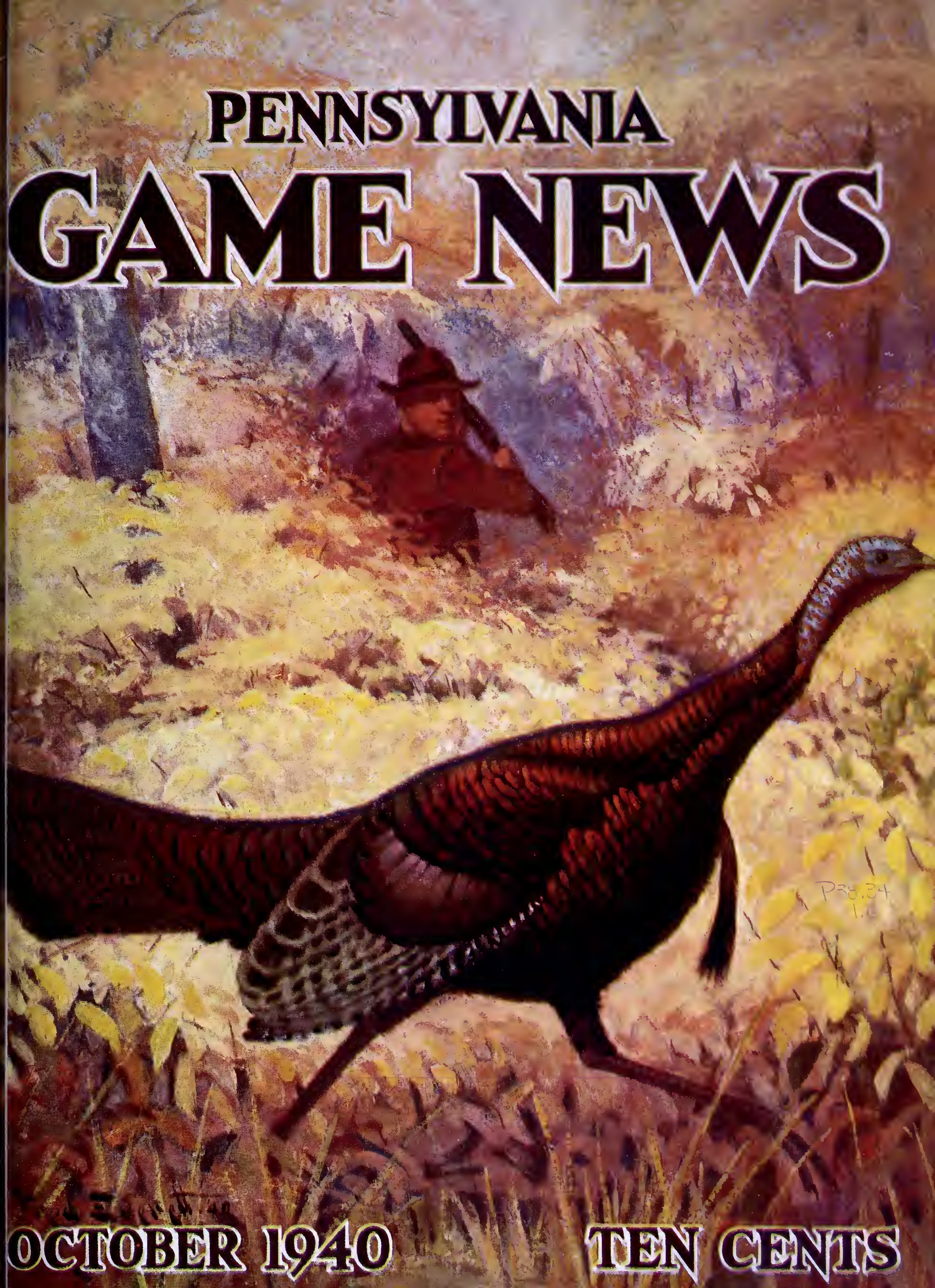
★ ★ ★

Always Be Courteous

★ ★ ★

Always Be Considerate

PENNSYLVANIA GAME NEWS



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UNION LABEL 6

SPORTSMAN'S SAFETY COMMITTEES

By ROSS L. LEFFLER*

MUCH has been said—thousands of words written—pictures shown—yet every few days there appears in the newspapers a story of some hunter who has been seriously wounded or killed while hunting. This situation becomes increasingly alarming when we learn that during the early part of the 1940 Groundhog season 18 persons were seriously injured and 5 were killed, despite widespread publicity given to safety through newspapers, radios, magazines, etc. Therefore, it appeals to me, that one of the most commendable activities the sportsmen's organizations could undertake would be the establishment of "safety committees" for the purpose of teaching their members to be more careful in handling firearms and to learn how to become more proficient in their use.

These committees would no doubt be responsible for a noticeable decrease in hunting accidents in future years, and would also result in better bags because of superior shooting; also less game is likely to be crippled to die of a lingering death because of inferior marksmanship.

If associations would include safety units as integral parts of their organizations the influence of their accomplishments would be felt throughout their entire communities and other groups would ask that they, too, be given the special training which the committees offer.

The influence of this precautionary measure would no doubt also be felt if and when non-military groups are asked to play a part in any home defense plans which might be contemplated by either the federal or state governments.

Every sportsmen's organization has among its members men who are experts with firearms. Usually some of these individuals are affiliated with the National Rifle Association and would therefore be especially well equipped and trained to impart their knowledge to other members of their organizations Such being the case the Game Commission sincerely hopes and advocates that every club will take advantage of this wonderful opportunity to take part in a program which will help several very important causes.

The Commission feels also that many organizations would be greatly benefitted if their members were taught all the important essentials of First Aid. Such knowledge would be of the utmost value not only when hunting but during any emergency which may arise. The more persons who are qualified to administer first aid properly the less likelihood there will be of some unfortunate person becoming permanently maimed or possibly even dying because no one on the ground at the time of the accident was equipped to administer even temporary help in the form of first aid to the hapless victim. Surely in every locality where there is a sportsmen's organization there is a physician who would gladly offer his services for such a worthy cause.

Sportsmen's organizations of today have far greater responsibilities to mankind than ever before, and if such associations are to take their rightful place in their own communities they will have to accept these added responsibilities with the same fine spirit which they have shown toward the conservation of the natural resources of this Commonwealth. The conservation of our natural resources is very important but of far more importance is the **conservation of human life.**

*President, Penna. Game Commission.

An Ardent Woodcock Hunter is Dr. Wilbert D. Embrie, Member of the House of Representatives

Call a Cad a Cad*

BY an exaggerated sense of good fellowship and ways of the gentleman, the great majority of American sportsmen are still playing sucker to a none too small minority of "gamehog" hunters.

This was driven home by the recent hunting season when the usual underbreath tales of illegal exploits seemed just as rampant as before all the campaigns of public enlightenment.

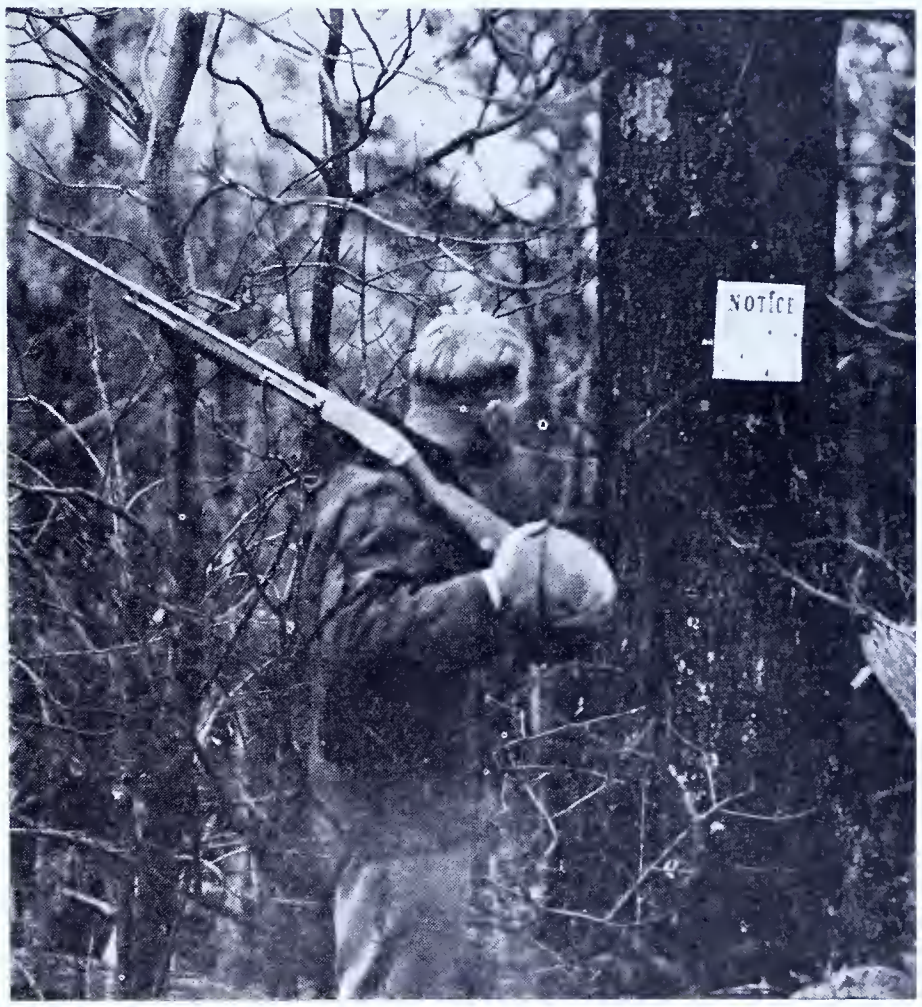
You, as the sportsman who frequents the woods and fields, know the stories:

The staunch citizen and self-styled sportsman returns from his big game hunt with a fine moose trophy. Secretly he whispers to his friends that two other moose were shot before he got a head worth keeping. . . . Oh, well, the natives needed the meat. The trip required a lot of time and expense. The devil with limits!

A certain type farmer who has been complaining about depredations by hunters posts his land securely, blatantly declaring "No Hunting." Then when the season opens he invites in his select friends and tells them to go to it. It's his property. His land produced the game. His grain fed it. The devil with limits!

The metropolitan hunter hastens to the best pheasant cover at the opening gun. The birds are aplenty and he stuffs his hunting coat far beyond its legal capacity. Back home neighbors gather 'round to admire his prowess and hear the alibi for the extras. Someone else would have gotten them anyway. He has only two days to hunt during the entire season. Think he's a sap? The devil with limits!

It's time that the real sportsmen who are footing the conservation and restoration bill call a halt to this sort of stuff. The part of the good fellow and gentleman can be carried too far. By the very fact that we listen to these "smart aleck" accounts of undetected violations without at least giving vociferous protest means that we are condoning and fostering such spirit!



The "smart aleck's" and game hogs are responsible for a great many No Trespassing signs.

No matter how valuable the instrument of education may be for eventually inculcating respect for the game laws, you can't laugh off the need of rigorous enforcement if any game restoration program is to be effective. There is no greater truth than the oft repeated axiom "an animal saved is better than an animal made." When a wiseacre minority practices a doctrine of the-devil-with-limits much or all of the constructive measures of the majority are futile.

And when real sportsmen tolerate and suffer this minority destruction by an exaggerated sense of good fellowship they are chucking all for a mess of pottage!

It is not for us to say that there were more game law violations this year than ordinarily, numerically speaking, but certainly there were enough. It is quite possible that better hunting conditions have resuscitated dormant game hog tendencies, though we would hesitate an opinion on this. But from widespread parts of the United States and Canada come sorrowful notes from conscientious hunters telling that the game hog and alibi slayer has been prevalent.

What to do?

The answer according to some is for every individual to act as a self-appointed game warden. Many who are backing constructive game restoration work by their money and sweat don't feel like pulling punches. They're ready to call the game hog the thief he is and treat him accordingly.

This means in every-instance of open violation the reporting of the incident to proper authorities. By what stretch of imagination about gentlemanly precepts can we justify any other action? The man who sneeringly tears down the restoration structure that you have been nurturing deserves no more consideration than the thief who enters your home. Put the sneers where they belong!

But this does not take care of the big game hunter who selects his head from the dead, the type of landowner friend who has forgotten that game is everyone's property, or the suave slick who thinks the decent sportsman's a sap—those who break the laws and then confidingly brag.

What to do about this type of vermin?

Without calling up anymore courage than it takes to call a cad a cad, sportsmen of America could soon dwindle down these "smart-aleck" violators.

All that is necessary is a frown rather than a half-hearted smile, a few words of remonstration rather than of "courteous" condonement, the next time one of your wise guy friends pops off with a confidential tale of how he beat the game laws. Let's quit this business of encouraging and suckling a flock of violators by being "a good fellow"!

There's nothing in the world more effective in keeping the average man to the straight and narrow than censure by his friends. You wouldn't think it clever if one of your friends recited how he had committed a civil crime. Why should you regard a game law violation in different light?

The next time some one tells an underbreath violation story, make his face redden! When he smirks "The devil with limits, I'm no sap!" answer him with, "The devil you aren't."

— and Stop the "Smart Aleck" Game Hogs.

* Mississippi Game and Fish.

The Wild Turkey Played an Important Role in the Pilgrims First Thanksgiving.

THE WILD TURKEY » » Noblest of Game Birds

By Wm. G. Fluke*

WE are again nearing that time-honored occasion when we halt in our everyday activities to contemplate the mercies and kindnesses of Providence. For Thanksgiving we are indebted to the Puritans of New England, who first observed such a festival the autumn following the year of their landing. They had suffered dreadfully during the first winter. But a bountiful harvest having been ingathered in 1621 their good fortune was deemed a fitting reason for the appointment of a period in which publicly to give thanks. This instituted a festival now long observed annually, but in Massachusetts probably not adopted as such until 1680. Other periods for giving thanks were set aside, however, these were not at stated intervals, but were held whenever unexpected prosperity or unhoped-for aid in adversity moved them to special acts of praise.

Following the Revolutionary War, and formation of a Federal government, the feast became a national one. In 1789 George Washington appointed November 26 a day of national Thanksgiving. In 1795 he recommended February 19 as Thanksgiving Day, not of course, as a harvest festival, but rather in gratitude for the welfare of the nation. There were no more nationally proclaimed days until the time of James Madison, although many states kept up the custom.

Other colonies followed suit, Connecticut beginning the practice, it is believed, in 1639, and instituting it as a regular custom by 1649. Indeed, it is to that state we must give credit for perpetuating it. Connecticut early observed such a festival through civil authority, and was the first province to make it an annual occasion; it was a recognized institution even before King Philip's War. Even as late as the last decade Connecticut held a unique position among the states whenever November came. For "Uncle Toby", Connecticut's Governor Cross, annually wrote such a delectable proclamation the entire nation used to look forward to the next one. And the governor never failed the admirers of his exquisite sentiments and his masterly power of expression.

Two Thanksgiving Days were observed by the North in 1863, crucial year of the Civil War. Following Union victory at Gettysburg, Lincoln designated August 6 as a special Thanksgiving Day. Then on November 26, he appointed the second. Since then the last Thursday of each November has bee uninterruptedly observed, except for th divided thanks offered in 1939.

The first Thanksgiving by the Pilgrim was an impressive affair. The feasting laste three days Governor Bradford sent fou men to shoot wild birds for the feast, an we may be sure that they brought bac plenty of wild turkeys, for Pilgrim record tell us that there was a great abundance o these fine creatures in the forest at that tim The Wampanoag sachem, Massasoit, adde five deer to the larder and, together wit ninety of his befeathered warriors, attended

Ever since the first Thanksgiving observe by our Pilgrim forefathers the turkey ha been closely associated with that day, it i almost a symbol of Thanksgiving. Indee when we think of Thanksgiving an image o the turkey always comes to mind.

It is interesting to note that Presiden Andrew Jackson made reference to wil turkeys and other wildlife, as noted below in the opening paragraph of his Thanksgivin Proclamation, November 29, 1835:

"We thank Thee for the bountiful suppl of wildlife with which Thou hast blesse our land; for the turkeys that gobble in ou

*Member, Penna. Game Commission.

forests; the flocks of geese and ducks that honk on our streams and lakes; the clouds of carrier pigeons that darken the skies; and the vast herds of deer, antelopes and buffaloes that roam the boundless plains beyond the Blue Ridge Mountains".

As we again approach festive Thanksgiving it seems fitting to pay our respects to the wild turkey, which played such an important role in the feasts of those early days set aside to give thanks for life, health and aboundant crops. The high esteem in which it was held is evidenced by the fact that Benjamin Franklin and many others thought it should have been chosen for our national symbol instead of the bald eagle. As to the bald eagle Franklin had these objections: " . . . he is a bird of bad moral character; he does not get his living honestly; you may have seen him perched on some dead tree, where, too lazy to fish for himself, he watches the labor of the fishing-hawk; and when that diligent bird has at length taken a fish . . . the bald eagle pursues him and takes it from him . . . he is generally poor and very lousy. . . ."

Wild turkeys were found in great abundance by the North American pioneers. They ranged almost the entire length of the Atlantic coast from Florida to Nova Scotia, and west to Michigan. Great flocks of them roamed the woods and they often traveled great distances in search of food. They apparently were particularly plentiful in Massachusetts and New England, although they are no longer found there. An example of their early abundance is indicated by a report of Colonel Wm. F. Cody (Buffalo Bill) who acted as a scout for the United States Army soon after the transcontinental railroads were built. He once reported that a grand turkey round-up was made in which two or three hundred soldiers surrounded a grove of timber where with guns, clubs and stones they killed from four to five hundred of these birds.

Nature provided the wild turkey with a pair of stout legs which enable it to travel easily over a wide extent of territory in search of food. Although not migratory in the sense in which we usually employ the term, it does roam from one locality to another. These movements from place to place are made when the food supply becomes scarce or exhausted. It adapts itself very readily throughout its range with respect to food conditions. It eats, according to the available supply, acorns, berries, grapes, buds, weed and grass seeds. It is also fond of grain, particularly buckwheat, and devours innumerable quantities of insects, including grasshoppers. This varied diet apparently helps to give it the finest flavor of any fowl.

To those who know the wild turkey it is unquestionably the king of game birds, and it is one of the wildest of all wild things of the woods. It is also one of the wisest, as all turkey hunters will agree. A glimpse of him in his natural surroundings, dodging along, is a sight not easily forgotten. His body is usually a brilliant metallic bronze which reflects red and gold green. Each feather is tipped with a black band. The wings are black and bronze green, and the quills white barred. When he rises to fly, his broad wings throw off the sun's rays in an appearance of polished bronze and gold, providing a thrilling sight which can be imparted by none but this magnificent creature.

While the wild gobbler is often fairly large, he has a thoroughbred streamlined slimness, and is well moulded, not clumsy. He always appears confident; he walks proudly, with a springiness in his step; he is always alert for danger, and with probably the keenest eyes of any wild creature, seldom is off guard. When he senses danger, he holds himself so erect that he seems unusually tall.

The Indians referred to the turkey gobbler as Old Chief Galagina, "the Gobbling One." In the mating season it can readily be understood why the Indians used this name. The males gobble, gyrate and strut around, picking and teasing each other, or strumming now and then with the tips of their wings. Finally two or more engage in a fight from which one gobbler emerges victorious, establishing his claim as ruler of a given range—a claim no other gobbler is likely to dispute during the rest of the mating season.

After the mating season is over the gobblers forget their animosities and usually collect in flocks and remain together, becoming very friendly. At about the same time the female steals away by herself to make her nest, guarding her secret carefully from her many enemies. She often flies to and from the nest to avoid being followed. The young are very delicate and weak when first hatched, in many instances not surviving a good wetting or a chill. When in October the young are nearly grown, often several of the families gather in fields or open woods where food is plentiful, and remain together, with the result that there are at times parties of twenty-five or fifty united in one flock.

The males, as is well known, can usually be distinguished from the females by a large tuft of coarse black bristles which hangs from the center of the upper breast. This appendage is referred to as the "beard." An Indian legend tells us how the noble bird got its beard. Old Chief Galagina, "the Gobbling One," according to the legend, met the victorious tortoise returning from his famous race with the rabbit. The tortoise was wearing his trophy of victory, a scalp, about his short neck and the scalp was dragging in the dust. Old Chief Galagina, after expressing doubt as to his winning the race, commented on how awkwardly the tortoise wore the trophy. After making the humble tortoise miserable, the turkey offered to show him how to wear the scalp gracefully. The tortoise, after much persuasion, reluctantly handed the scalp to Old Chief Galagina. He placed it around his neck and with the hair hung gracefully from his breast, strutted off a few feet to let the tortoise get a better view from various angles. He then ran off, and the tortoise has never caught up to him. Old Chief Galagina is still wearing the tuft on his breast.

The wild turkey of North America should not be confused with the domestic turkey. Many people are of the opinion that the

(Continued on Page 26)

Our Puritan ancestors enjoyed securing a wild turkey for food.

Pennsylvania's Rabbit Transfer Program

By Wilbur M. Cramer

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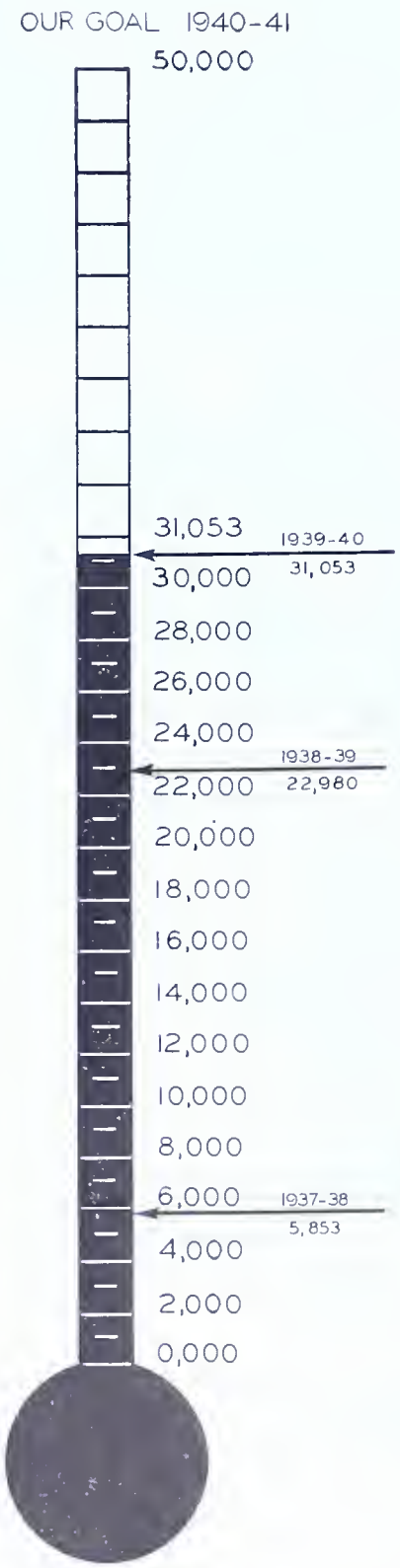
Editor's Note: This is a continuation of an article bearing the same title which appeared in the May, 1940, issue of the Game News.

THE live trapping and transfer of native rabbits plays an important part in Pennsylvania's game management program today, for it enables the Game Commission, and the sportsmen to harvest a crop of game from areas where no hunting is permitted, such as parks, cities institutional grounds, etc., and where uncontrolled dogs, cats, and other predators would likely take a heavy annual toll.

Game trapping also helps to relieve damage to nurseries, orchards, gardens, lawns, and truck patches, where rabbits often become a nuisance. By removing them from these areas many are saved that would otherwise be destroyed by landowners to protect their property, or be killed by predators of various kinds.



PENNSYLVANIA RABBIT "THERMOMETER"

It must also be remembered that a local rabbit supply can be built up by trapping, and it is not unlikely that the State will soon be entirely self supporting along this line. The sooner we become self-supporting the better, because we do not want to be caught napping should midwestern states some day forbid the exportation of these animals. Remember, too, that rabbits can be trapped more cheaply than they can be bought, thus the more that can be trapped and the less purchased, the more money will be available for other programs of the Commission. Because wild rabbits cannot be raised in confinement at a cost that will permit their production in large numbers for restocking purposes, and if the midwestern states should cut off the supply some day, then we may have to rely entirely on an extensive trapping program if this popular animal is to stand increased hunting pressure from year to year.

Which rabbit would you prefer to release for restocking purposes, the midwestern rabbit or the native cottontail? Western rabbits are box-trapped by local agents, no doubt mostly farmer boys, then picked up at various collecting points and taken to a central shipping point. There they are crated and given food and water. The crates are placed on an express company truck and left to stand in the draft on a cold platform or track until the train arrives to bring them East. They are packed into warm express cars and sometimes placed near hot steam pipes.

After at least a forty-eight hour ride on the train, the animals arrive at their Pennsylvania destination. They are unloaded onto another express company truck and are again permitted to stand on a cold drafty platform for a brief time until the Game Protector is notified and calls for them. Sometimes he may be on hand to meet them at the station He loads them onto a truck and starts on his distributing tour. Rabbits from the plains of the midwest are now released in their new environment in a country of hills, mountains and valleys.

Many of them have been frightened or too excited to eat; some of them have watery eyes; while a small percentage have some form of diarrhea. The weather may have been rather mild when they left the West but they may arrive in Pennsylvania in the midst of a terrific blizzard and must take up new homes under very adverse conditions. How many of these rabbits really survive and propagate in Pennsylvania no one knows.

The more wild game is handled the worse it is for the game. Thus the trapping of rabbits locally, where long transportation and greatly fluctuating temperatures are avoided, and where the animals are liberated in territory not so far removed from their own homes, will surely guarantee a greater survival of breeding stock by the next season than purchasing rabbits from territory thousand miles distant.

While space will not permit the inclusion of all areas trapped, we shall include, for the benefit of the readers, a summation of a limited number in each case so that at least a cross section of the program will be gotten. For instance 2,048 rabbits were secured from 11 state and city parks; 10,717 were trapped from 78 boroughs, towns and cities; and 1,09 were removed from 6 state institutional grounds.

There are other places than parks, towns or cities where game can not be hunted, or is not hunted, and where it would fall prey to predators and man-made implements or devices. Thus, 2,313 rabbits were trapped on 28 such areas, constituting, for the most part yards of industrial companies. such as brick yards, railroad yards, lumber yards, cemeteries, various right-of-ways, etc. Game Protectors were also called upon to remove rabbits causing damage to nurseries, truck patches, gardens, etc., and 1,158 rabbits were removed from 22 of these places.

These areas are all what we might call auxiliary or supplemental sources of supply. They point out to us very plainly that if Game Protectors and sportsmen search very carefully for places where local rabbits may be secured such areas will be found in greater numbers than at first supposed.

The regular sources of supply that are constantly being developed are the State Game Propagation Areas, some refuges or Farm-Game Projects, some Auxiliary Game Refuges, some of our regular Game Refuges and many smaller game refuges established by the sportsmen.

Many of these areas have a great concentration of rabbits, as can be noted from the table on page 27.

Since data is available for most of our trapping areas only since the Commission decided to trap and transfer game on an extensive basis two years ago, it is too soon to know what the harvested game crop from these areas will be year after year.

We can, however, give consideration to what has been happening on one of our earliest and best trapping areas in the southeastern part of the State over a period of years. Let us review the record for the Maiden Creek Dam Area in Berks County, Auxiliary Game Refuge No. 99, or in reality the Reading City Watershed, the land area of which is covered with pine plantations in various stages of growth. We started to remove rabbits from this area through the driving method during the winter of 1932-33, because the city officials complained of damage to the young pine trees by rabbits when there was snow on the ground.

Ever since that time the sportsmen's organizations in Berks County consider it a regular order of business each winter for them to assist the Commission in conducting these drives. The land area of this watershed is about 2,000 acres, but it is believed that not more than half of it has been trapped in any one winter. Rabbit drives are conducted during the Christmas holidays and over week-ends during the winter when the weather is favorable.

Some rabbits escape the drivers so that some seed stock is always left on the area for the next season. This area may cease to be much of a rabbit supply when the various pine plantations all develop to such an extent that the ground is covered with pine needles and the food supply is eliminated.

Pheasants are also abundant on the area, and many have been trapped and released elsewhere in the county.

When the following eight-year production record is considered, the Maiden Creek Dam Area might well be termed one of the best Game Farms in the country:

A typical scene, Maiden Creek Dam Area.

Kinds of Game	1932-33	1933-34	1934-35	1935-36	1936-37	19' 7-38	1938-39	1939-40	Totals
Rabbits	614	671	879	275**	40*	660	1,227	1,518	5,884
Male Pheasants	41	65	102	25		8	19	79	339
Female Pheasants	131	173	227	380		18	125	195	1,249
Quail	16	30	30						76

*Following the severe winter of 1935-36, the game population on the area was at a very low ebb. Only 275 rabbits were trapped before the severe cold weather and great depth of snow stopped the program for the season.** The following winter only 40 rabbits were trapped and when it was seen how scarce they were, trapping was discontinued and these 40 rabbits were released on other parts of the area.

The average annual game supply for eight years from 1,000 acres of the Reading Watershed area under both favorable and unfavorable conditions, consisted of 588 rabbits and 198 pheasants. On the basis of 1,518 rabbits trapped last winter, the abundance of rabbits on this thousand acres during the past winter can very conservatively be figured at one rabbit for each .65 acres.

Very little effort is required to maintain game on the area. A few food plots are planted each year with WPA assistance, in open spots near the sections most heavily populated with game. The pheasants feed to a great extent in the surrounding corn fields and orchards.

The Burton Explosives Company property, in Lawrence County, Western Pennsylvania, also had one of the greatest concentrations of rabbits to be found within the State. This tract contains 600 acres, but trapping activities were conducted only on half of it because of the inability of our agent to cover all of the area with his box traps. He secured 10 rabbits and 12 ringneck pheasants last winter. The rabbit abundance on this 300 acre tract was one rabbit to every .73 of an acre.

During the fiscal year which ended on May 31, 1940, 31,053 rabbits were trapped in Pennsylvania, as compared with 22,980 the previous year. This represents an increase of 35 1/10% in the rabbit transfer program, and puts us another step nearer our anticipated goal of 50,000 rabbits a year.

The total cost of rabbit trapping for the year was $18,458.61. This included the cost of releasing and redistributing these rabbits, and all other charges excepting the proportionate part of the salaries of field officers who participated in the program. This would make an average cost per rabbit of $.509, which includes redistribution.

If we estimate that our box traps, crates, and other trapping equipment will last five years, and divide the expense of same over a five-year period, the rabbits trapped during the past season have really cost the Game Commission an average of .54c each. This includes the cost of redistribution. If the manufacture and purchase of the equipment is considered, and all other rabbit trapping expenses, excepting traveling expenses necessary to redistribute these animals, the average cost of trapping each rabbit last season was .46c.

Six hundred and four (604) special agents were appointed in 53 counties of the State to assist the Game Protectors in trapping game.

In the City of Williamsport the Boy Scout troops assisted very materially in the program. They secured several hundred rabbits in just a few weeks' time. Each troop was assigned a certain section of the city in which to operate. The scout leaders were appointed agents of the Commission for this work, and the program was handled through them. No doubt this same plan can and will be followed this coming winter in other cities.

Many sportsmen's organizations took quite an active part in game transfer work, especially in Allegheny, Berks, Cumberland and Schuylkill Counties. In some counties sportsmen's organizations have sponsored refuges or propagating areas from which a supply of game may be secured. Among these are Schuylkill, Clearfield, Jefferson, Crawford and Cambria Counties.

Some rabbits were trapped in each of the 67 counties of the State. Allegheny and Berks Counties were tie for first place in having the greatest number of rabbits trapped, with 2,596 each. Other counties in which more than 1,000 rabbits were trapped were as follows: Crawford 1,899; Mercer,

(Continued on Page 27)

Different stages of growth among the pine trees on the Maiden Creek Dam Area.

The Value of Predatory Animals

By W. J. Hamilton, Jr.

A Few Words in Defense of "Vermin", whose Destruction Defeats the Very Purposes for Which it is Designed.

★

The skunk is a good friend of the farmer, for the insect millions, fruit, berries and injurious small mammals are its chief food.

A BELATED effort is now being made to restore and conserve the wild life of our continent. The alarming decrease of game, fish and fur-bearing species has caused grave concern to the custodians of wildlife, and much effort is being expended to bring back these species. Research projects on fundamental wildlife problems have been started in a dozen different States, and the results of these have dispeled many popular notions. But one persists—the mistaken premise that predatory species, "vermin," are not compatible with the natural increase of game species. In spite of enlightening researchers to the contrary, the biased opinions of sportsmen and even game officials place the furred predators in a derogatory light. Predators are ruthlessly destroyed in many States on the assumption that their decrease will witness a revival of game. Alluring bounties, encouragement of vermin campaigns, and the indiscrimiante slaughter of predators has continued for years, yet there is little evidence that such wanton killings have increased our game species.

To question the wisdom of this destruction, or the general encouragement of vermin campaigns, might well be considered rank heresy. The time-honored prejudices of sportsmen are seemingly impossible to surmount. Most hunters generally lose sight of the fact that since time began, flesh eaters have preyed upon plant eaters to the mutual benefit of both races. Predatory species are a check to the undue increase of herbivores; without them the herbivores must increase until their food supply is exhausted, when they speedily starve. Some may argue that the disturbance of the environment by man has changed natural conditions to such an extent that predator control must be practiced. There are many instances which show such a thesis to be untenable. One will suffice. In the Kaibab National Forest of Arizona, the wolves and mountain lions were largely destroyed by man. The deer, relieved of their natural enemies, increased to such an extent that their food supply failed and in consequence many died.

Predatory species are numerous in the bird and mammal world; we shall confine our remarks to three widespread predatory mammals, namely the fox, skunk and weasel. These forms are found throughout the United States. Before discussing the relationships of these three animals to game species, it will be well to consider their food habits, for this will best reflect their importance to game.

The several species of foxes are widely accused of being blackguards; animals which have no place in the scheme of game restoration. Most sportsmen regard them as "vermin" to be killed at sight.

The food of the red fox has been studied rather well in the past few years. Investigations[1] in the mid-west, Michigan, New England, New York and Virginia are all in essential agreement. The studies indicate that the fox feeds chiefly upon fruit and berries, small mammals, chief among which are mice, carrion, insects and an occasional bird. I do not doubt it prefers a tender grouse to a half dozen mice, but the fact remains that mice are far more abundant than grouse, and much easier to catch. A few years ago a prominent game official, after admitting his State had made no scientific inquiry on the food habits of the fox, categorically stated that a game protector, through cursory field examination of dead foxes, concluded that 90 per cent of the food of the red fox consisted of grouse and rabbits. It is difficult enough for the trained biologist to analyze and to interpret his findings in food habits research. How can we expect a tyro to judge so readily of the remains found in stomachs of predatory animals? Yet the statement of this game official was widely circulated.

The skunk has long been held in ill repute by sportsmen. The antagonism of hunters cannot be attributed to its mephitic odor, but rather to the well-nigh universal assumption that it lives only to dine upon quail, pheasants, rabbits and other game. The attitude is reflected in the game laws of more than a dozen States which give the skunk no protection. It cannot be denied that the skunk does kill game upon occasion, but extended investigations, based upon examinations of several thousand stomachs and droppings of these animals, prove them of great value to the agriculturist. The chief food of the skunk are the insect millions, fruits, berries and the small animals which everywhere abound. The first legislation in New York protecting the skunk was passed at the insistence of the hop growers, who recognized the worth of these fur-bearers in controlling the grubs of the hop weevil, an insect which at one time threatened the very existence of the hop industry.

It is seldom that we hear a good word for the weasel. Its general physiognomy implies a lust for carnage in keeping with the long established myths of blood sucking credited to this species. But weasels do not suck blood habitually. Like other flesh eaters, they consume quantities of flesh, fur and bone. This trait makes it not difficult to determine, by stomach analysis, the food habits of the weasel. An analysis of several hundred weasel stomachs in New York, secured chiefly during the fall and winter, proved that more than 95 per cent of their food consisted of small animals, chief among which was the ubiquitous and destructive field mouse. Less extensive study of the spring and summer food indicated it was little different from that taken in the winter, although we find weasels including insects and earthworms in their dietary at this season. A weasel den bordering an Iowa swamp produced the remains of blackbirds and a quantity of ground squirrels.

Reprinted from New York Zoological Society Bulletin.

[1] Jour. Mamm. Vol. 14, no. 1; vol. 16 no. 1 and 3.

A weasel raid on the poultry house is widely publicized; widespread destruction of chickens by the rat hardly elicits comment. Yet—weasels are the inveterate foe of rats, large numbers of these rodents being destroyed by these useful little marauders.

Interrelationship of Species

Few non-scientific persons realize the interdependencies which exist within the organic world. No animal or plant can live unto itself alone. The immortal Darwin was the first man to make clear the intricate interconnections of Nature, which we commonly call the Web of Life. Darwin's classic example showing the connection between cats and clover is known to all biologists. It is not difficult to find similar examples anywhere. A few instances showing the relationships which exist between predatory mammals and game species will be given.

Dr. A. K. Fisher, an outstanding authority on American bird and mammal life, relates the following story:

An extensive marsh in northern New York harbored great numbers of ducks, rails, turtles and other aquatic life. The snapping turtles deposited their eggs in great numbers in the sands of an old beach bordering the swamp These delicacies attracted the skunks of the neighborhood, and their feasts so reduced the total output of eggs that only a small percentage of the young hatched and reached the protection of the water. As time went on, conditions changed. Skunk fur became fashionable, and commanded a good price. Within a short time the skunks almost disappeared. When this check on their increase was removed, the snapping turtles hatched in great numbers When their numbers had been properly controlled by the destruction of a large portion of their eggs, their food supply was adequate, but when their numbers greatly increased, the supply proved insufficient.

Finally, through force of circumstances, the turtles added ducklings to their fare until the few ducks that refused to leave the marsh paid the penalty of their persistence by rarely bringing to maturity more than one or two young. At last, there came about a depreciation in the value of skunk pelts, with a corresponding loss of interest on the part of the trapper, so that the progeny of the surviving skunks congregated at the old beach and devoured the eggs that had enjoyed a brief period of prosperity. This, coupled with the destruction of the turtles by market hunters, attracted more ducks, and the old marsh became a populous center for game birds.

It is well known that foxes, raccoons and opossums likewise enjoy the eggs and young of turtles.

The British naturalist, Charles Elton, cites[2] an illuminating instance of the effect on game of wholesale predator destruction. In Norway there is a bird called the willow grouse. In early years these willow grouse used to multiply periodically and every three or four years each sportsman got a fine bag. After these good years, the grouse used to die off from disease because they had become so crowded. At the same time, the Norwegians had a great drive to wipe out birds and animals of prey—eagles, foxes, martens and other fur animals. As the birds and predatory mammals have become scarcer, it has been noticed that the epidemics among willow grouse have become worse and worse. Instead of more and better willow grouse populations having been produced by protection, the stock has become progressively more diseased. It was suggested that the reason for this greater mortality was this: when a grouse became sick with coccidiosis, it weakened and flew less readily, and was thus easier to catch. As a result, in the old days the predators used to catch the sick ones more readily than the healthy birds, and so prevented disease from becoming too severe, except after the birds had become very abundant.

While making a detailed study of the habits of the ruffed grouse in Minnesota, Dr. Ralph T. King discovered that not all the animals commonly suspected of being hostile to the grouse actually are. On the other hand, those which have been least suspected often do the most damage. This keen observer found the chipmunk an enemy of the grouse. The little striper evidently thinks grouse eggs make fine marbles. It rolls them from the nest, plays with them and hides them, usually without breaking the eggs. On one occasion King found a grouse nest with twelve eggs. Next morning they were gone. Suspecting a chipmunk, he searched about and found all twelve.

Now the fox, while fond of grouse, finds it much easier to dine on chipmunks. Not only are they far more numerous, but they cannot take to the air as can a grouse when pursued. That foxes can and do destroy chipmunks is amply demonstrated by finding their remains in the stomachs and droppings of foxes. If we study the simple food chain below, we are at once made aware of the importance of considering these interrelationships: The chipmunk is a predator of grouse, the fox is a predator of both chipmunk and grouse. But the chipmunks are far more numerous than foxes, perhaps 200 times as numerous in a given area. Inasmuch as the fox destroys more of these ground squirrels than grouse, it might well be argued that the fox is not only entitled to a few grouse, but further, an actual asset to the grouse by its destruction of a far more poentially dangerous predator of the game bird.

Recently two Utah game managers reported[3] on their sage grouse survey. They relate one instance of ground squirrels killing young sage grouse, leaving only three or four chicks from a covey of fourteen. Ground squirrels also prey upon other game species and poultry. Coyotes and desert foxes take an appreciable toll of these ground squirrels and thus lessen predation upon desirable birds. Inasmuch as ground squirrels are several hundred times as numerous as the large predators, might we not rightly argue that these furbearers are an actual asset to the game they are accused of destroying?

The lessons here pointed out are obvious. The examples just cited are simple and easily followed, but others are more complicated and sometimes difficult to fathom. Shrews, small mouse-like creatures which abound in suitable cover throughout the country, have been known to destroy the eggs of ground-nesting birds. Some of these bird species have eggs as large as those of the quail. The bob-white quail is America's most beloved game bird. If it is shown that shrews are predators of these birds, through destruction of their eggs, how can we hope to control shrews other than by the encouragement of predatory species, which are known to destroy large numbers of these little mammals?

Value to Game Species

We have seen that wholesale destruction of predatory species does not often accomplish the anticipated end results of favoring game increase. The disturbance of Nature's equilibrium sets in operation a host of unlooked-for consequences. Each animal in an ecological complex is closely related to its neighbors, the whole making up an elastic web which, if but slightly disturbed, makes for great, and frequently grave, consequences.

(Continued on Page 30)

[2] Exploring the Animal World, p. 89.

[3] Utah Agr. Exp. Sta., Misc. Publ. 10, 1933.

This chart, prepared by the author, largely absolves the skunk of the charge of being a heavy destroyer of game.

LAZY BONES

by

Jack Anderson

★

"Old Grumpy"

NOW old Grumpy Davis is not a lazy man. Oh, everybody accuses him of indolence, says he hasn't an ounce of spirit, a grain of energy. But I've a few things to say about the matter, then let the reader judge for himself. We'll be giving Grumpy a break that way. Personally, I like Grumpy, and don't think there's a lazy bone in his body. There's only a lot of grey matter reposing beneath his occipital.

Take that hunt our gang had up in Monroe County in the Pocono mountains. The country was the laurel-infested, swampy, scrubby Little Bushkill district a few miles south of Peck's Pond. The mountains there are a jungle—nothing less. And Old Grumpy? He stormed through that mess (stormed I said, for he was tireless) and all that day he didn't get a shot at a deer. Did he grumble? No! Next day he was out again, battling laurel so thick he had to crawl on hands and knees. Do you call such a man lazy? I should say not!

Some people judge the work of others in the light of their own opinions as to just what constitutes work. There is the root of all the trouble. That's why they look down on Grumpy.

Now probably the reader has never been in the Pocono mountain country, much less at Old Grumpy's homestead. So let me tell you . . .

Old Grumpy lives in a little farmhouse near Peck's Pond. It's a little, frame house, flanked with a wintergreen still shack, a barn, and a house with a cresent hole in the door. There's only a little clearing about the house, then there's a forest of mixed birches and evergreens. The little clearing is rock-strewn; there's only a small truck patch, wire fenced to keep out deer, cottontails and snowshoes. An old well stands beside the house and a dilapidated pail as leaky as a seive hangs over it. An old hand plow, red with rust, stands before the barn, and usually there is a Model T of 1924 vintage beside it. Which all is quite typical of a Pocono moutaineer's homestead.

Grumpy's wife can often be seen about the place, engaged in household drudgery, and if you rumble by in a car on the cracked macadam road Grumpy's fourteen offsprings will stare wide-eyed from the finger-marked front window.

Old Grumpy will not be in evidence. Not unless it's meal time, or evening siesta. If it be summer Grumpy will be somewhere on a stream, fishing and fur prospecting. Fall, he'll be hunting. Winter, he'll be trapping; Spring, fishing.

"Grumpy, there's a lawn to mow," his wife will say.

"All right, Martha. Oney I'm darned if I kin do it today. My back is killin' me. Git one uh the kids."

In the fall of the year Old Grumpy takes in boarders. In fact the hunter-boarders are his main means of livelihood. He acts as guide for the hunters, and a better guide doesn't exist. He knows every stump from Lord's Valley to Effort Mountain—and every animal that's apt to be hiding behind the stumps. That's how I got acquainted with Old Grumpy. I was one of the boarders.

The first night of hunting season we gathered for a wind fest in Old Grumpy's log-stove heated kitchen. Grumpy is serious. "We've got a big job tomorrow, boys."

"We've got a big job tomorrow, boys."

"I got that buck", said Dad Keyes.

We are curious. "What's up?"

"We're gonna drive the swamp."

"Uh-huh!"

"I'll lead the drive an' the kids 'll drive with me. I'll station youse guys along the ridges."

We nod.

"Remember, don't shoot unless you see a deer. **With** horns. None uh this practice poppin' at squirrels or cottontails." He lighted his aged, charred briar and added: "Cause I ain't gonna stomp through these laurels and scrub oaks just fer fun."

I got a good stand the following day, on a rock cliff, overlooking a little marsh. Deer trails streaked away in all directions. At noon four does thumped by; at three in the afternoon two more does. Not a buck. But I heard much shooting—those thrill-inspiring, hollow cracks from the depths of the forest—and I was confident that our party had bagged several bucks.

That evening Old Grumpy looked as if he had been in a battle. His clothing was torn and shreddy, splashed with mud; he was cut and bruised. His kids—they were all back, he had a roll call—had just enough energy left to drag listlessly to their bunks. Old Grumpy crept into the barn and returned much refreshed, and smelling strong. The party had two bucks.

But there is an interesting tale . . .

"I got that buck!" said Dad Keyes, another hunter, apropos of an experience he had had. 'I'm sure I got him. Blood splashed all over the place where he stood. Too bad there was no snow on the ground."

Old Grumpy left the lantern-light for the darkness of the next room. He soon returned—in hunting outfit, carrying his rifle. "Let's go," he remarked.

"Let's go, you say? Where?"

"After that buck. I can trail him, snow or no snow—if he's hit."

Dad Keyes was incredulous. "Not tonight, in this cold, in that woods—"

"If he dies that meat will spoil. Tomorrow might be too late."

"Holy smokes!" expostulated Dad Keyes. "But I couldn't even find the place in the dark."

"were you at your stand when you fired, Dad?"

"Sure I was."

"Then let's go."

"But we'll break our necks stumbling through that woods tonight."

"I've got a couple of grade A flashlights."

Dad Keyes paused to think But he could grasp hold of no further excuses. Reluctantly he slipped into his hunting harness. Being a good friend of Dad Keyes I was dragged in on the party. A vision of a good bunk haunted me—a vision replete with the godly warmth of regular army blankets—but I plunged out into the cold, starry night, As the cold hit us Dad Keyes murmured a disgruntled, "Gee whiz . . ."

It was four miles to the stand where Dad Keyes had been—four miles of rooty trail, rocks, hillsides covered with birch saplings that snapped ears and hands partially-numbed with cold. Of course there was light, but a flashlight is a meagre substitute for Old Sol. A forest at night is hostile, like a giant unseen enemy.

And be it known that to keep up with Old Grumpy on a forest trail is a herculean task. He takes big strides, and takes them often. He also has an amazing faculty for smelling his way in the dark without colliding with the little twigs and branches that an ordinary woodsman must contend with.

Arriving at the stand, huffing and puffing: "Here-we-are-at-last," sighed Dad Keyes.

"Yep," chimed Old Grumpy, fresh as a daisy. "Now where was that deer . . .?"

Dad Keyes scratched his skull. "First, where'n hell am I?"

"Where'n h . . . ? am I?"

"He thrashed madly about in the brush, trying valiantly to rise."

"At your stand."

"But which way is the river?"

Old Grumpy pointed.

"Oh. Then this way . . ." Dad Keyes indicated with a cold-numbed hand.

Old Grumpy started out; we followed. "I know exactly where that dear run would be," Grumpy said.

A few minutes thrashing down through a clump of laurels, then Old Grumpy began searching about on a narrow deer trail. Dad Keyes and I stood by, shivering and gazing lazily about in the darkness, wishing for a log fire and a bunk Suddenly Old Grumpy sighed: "Ah!" Like Sherlock Holmes, he took off on a trail. "Blood," he cried, and like a bloodhound set out on the scent. We followed.

"You did get a hit, Dad. A good hit.

"Yeah, but we might trail him for miles."

"He's a big one, worth trailing." Then: "Ah, here he left the trail." After thrashing through a thicket: "He's headed for the swamp."

"He would," said Dad.

What followed is a nightmare. Now I sit by a fire, and it is good and warm. Coffee and cigarettes are within my grasp; cushions and radio dials and foot stools invite me to accept the creature comforts of modern civilization. Yet I shiver and am uneasy. Memories—bitter memories—act that way. Ah, the cold! the swamp! the stinging brush! Wearly, endless miles! The sleeping sky, cold and merciless, with the northern lights a pale glow above the still forest!

Old Grumpy was tireless. Again and again Dad Keyes and I begged rest. "But we're getting near now—look here, this big splash of blood."

"Ye gods! Ye gods! How can a deer lose so much blood and still go on?" Dad Keyes demanded desperately.

But there were more miles to come. Dawn crept into the east. It grew still colder. A grey haze succeeded darkness and soon a red ball flushed the tips of distant evergreens. And then Old Grumpy cried: "There he is!"

The buck wasn't dead, but he was down. He thrashed madly about in the brush, trying valiantly to rise, his shattered hindquarters dripping blood. Old Grumpy raised his .30-06; then a boom and it was ended.

Dad Keyes and I were too tired to be elated. Rest, rest, we wanted rest. But Old Grumpy wouldn't allow a moment. He gutted the buck, hung him on two poles. "I know a short cut back to camp," he said. "It's only five miles."

I said nothing, but my heart was with Dad Keyes when he sighed: "Oh-h-h . . ."

Five miles can be longer than the long, long trail. Those five miles were just such miles. When we arrived at camp Dad and I wanted to hear nothing of the trip, or hunting for that matter. Sleep, sleep—we wanted sleep, and we lost no time getting to bed. But even as I undressed Old Grumpy was hitting back for the woods. He was going to help on a drive.

I remained over one day after deer season. I arose at seven and Old Grumpy was basking in the sun before the cabin. His wife and kids were busy with the washing that had been neglected during deer season. Suddenly, "Grumpy, how about hangin' up the washline?"

Old Grumpy stirred uneasily. "All right, Martha," he replied. "Oney darn my arms hurt too much to do any stretchin'. Let one uh the kids do it."

And before I left for home Old Grumpy was on the trail, a pack of traps on his back. There was a wild gleam in his eyes as he disappeared into the forest.

That's all I'm going to say. Old Grumpy is, or is not, lazy. I leave it all up to you. I still think he's long both on ambition and brains.

"Old Grumpy's Homestead."

RUFFED GROUSE POINTERS

By SAMUEL B. WEBB

★

"You won't get them by standing around and chewing the fat."

THERE is no sport to which the maxim "live and learn" more readily applies than shooting. I feel quite sure that is the primary reason why hunters have such a good time together. The vast majority thoroughly enjoy swapping stories and relating their personal experiences in the out of doors; and, to me, partridge shooting is a sport where realization is betetr than anticipation. A vote of thanks to those individuals who have given me a lot of the information herein contained.

The ruffed grouse is still an enigma to the scientists. I understand that Mr. Gardiner Bump, New York Superintendent of Game, will shortly publish a book on the life history of the grouse. I heartily recommend the purchase of it to you, sight unseen, if you are an enthusiastic partridge shooter.

I know of no other game bird that is a better example of protective mimicry and coloration. On wet and cold days you occasionally see them fluffed up squatting under a bush like bantam hens. At other times they appear almost snake-like, with neck elongated to what would seem to be the breaking point. They are reluctant to move from the first position but will leave the ground quickly when in the latter pose; very often assuming it immediately upon alighting in a tree. Normal proportions are most common with contracted tail that instantly expands when they are alarmed. Thus far I have not been able to conclude what effect, if any, various ground positions bear to the flight.

There is a very distinct color variation in partridges. The light colored, gray or birch partridge is supposedly native to Canada and has filtered into the northern states, whereas the brown bird is more common in the southern states. This may be a correct statement, but my experience has been to find them pretty well mixed up. They vary markedly in color, size and weight. Grouse will weigh anywhere from one to two pounds, the average being twenty-four ounces.

How can you differentiate the cock from the hens? The answer is you can't every time without sexing them. Arthur Allen, in an article entitled "Sex Rhythm in the Ruffed Grouse", outlines the general characteristics of the male and female rather clearly and concisely. "All female measurements average less, particularly the tail, which is nearly an inch shorter. If this were all, a small male might pass for a large female, because both birds wear ruffs, though these are much smaller in the females, and females show the same range of color variations as the males. A fairly conspicuous color difference, however, is that of the breast which, in the females, is pinkish brown and not crossed by the short black (or brown) feathers of the fore part of the ruff. In the males, on the other hand, the ruff is indicated across the breast, even when the long lateral feathers are retracted, as a line of much darker feathers. The black band on the tail is never solid and continuous across the tail of the female, being interrupted or broken up on the two central feathers. The majority of males, on the other hand, have the band continuous on the middle feathers, though in at least ten percent it resembles that of the female"

It is safe to say that a hen pheasant will lie better than a cock bird will. I should like to know if the male and female grouse differ to any extent as far as their actions are concerned when hunted. If this subject interests you, take a bird to someone who can readily show you how to sex it without spoiling the meat; keep track of your findings for a couple of seasons and be good enough to let me know the results.

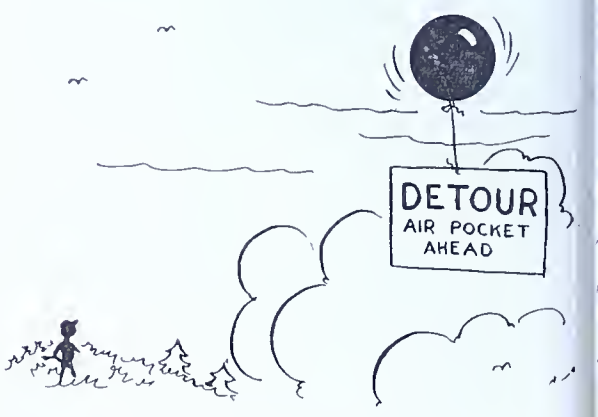
"If it is late in the season hunt closer to evergreens than you would ordinarily."

On rare occasions they band together, and I have heard of two authentic cases where one hundred and fifty or more birds have been seen in a flock. Grouse disease subjects the birds to a cycle. It is interesting to note that last year there was no open season on grouse in the entire area comprising the Provinces of Ontario and Quebec, whereas Maine, New Hampshire, Vermont, Massachusetts, Conecticut and New York all had an open season of a month or more. Weather conditions and disease help and hinder game more than man can ever attempt to do. Just remember that you are dealing with a pretty strange bird to begin with.

Anybody's prime requisite for partridge shooting should be the most careful selection of a shooting partner. Shooting ducks, quail and doves with a fellow is quite different from accompanying him in the brush where you cannot see him eighty percent of the time. For this very reason many hunters prefer to shoot grouse alone. However, there is no substitute for a shooting partner, it is real companionship, and often a bird that jumps in front of one gun will give the other fellow a nice crossing shot.

I can't quite understand why woodcock and partridge are invariably mentioned in the same breath. Woodcock are not as good to eat; much easier to kill, and have entirely different habits from the grouse. You will find them in the same covers occasionally, but if you prefer partridge shooting, concentrate on spotting partridge covers. There are many such places that will never harbor a woodcock. Last year I picked up just five woodcock and almost five times that many grouse. If a country is known to contain grouse you don't have to trek miles and miles to find them, but you won't get them by standing around and chewing the fat either.

Without a doubt, food is the governing factor in any cover. If you are just driving along on the back roads, look for alder swales, clumps of white birch and poplar, sprouting woodlots, hedgerows, lanes flanked by grown-over fence lines, small valleys running down from wooded hillsides, brushy corners in fields, thorn apple trees, old orchards, overgrown stone walls and beech woods. If you find it is a lean year for beechnuts, eliminate that type of cover for the season. If any of these spots are near a stand of hemlock your chances of finding birds are greatly increased. If I were asked what the grouse's basic food was during the open season in our section, my answer would be "thorn apples." Some of the foods found in their crops are barberries, blackberries, elderberries, poison ivy berries, wild grapes, apples, sumac seeds, grasshoppers, crickets, hemlock cones, beechnuts, bittersweet, wild parsnip leaves, sheep sorrel and clover. They feed on many other things including a long list of buds and insects. Clover leaves seem to be a favorite food and I am told that the old lumber roads in Minnesota and in northern Michigan afford excellent shooting because the grouse come to feed on the clover that has seeded itself from the hay taken into the camps. The teams thoroughly fertilize the center of the



"I am quite convinced that partridges have definite flyways."

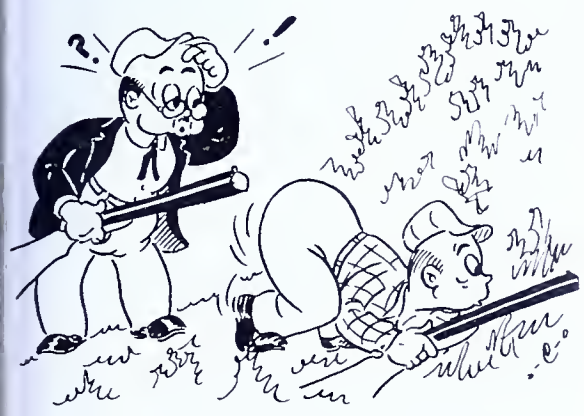
Reprinted from The Backlog, Campfire Club of America.

roads and the result is a first class partridge dining hall.

Don't waste time in jungles even though they look A-1. Nature provided these places for a definite purpose. If it is late in the season hunt closer to evergreens than you would ordinarily, and if possible closer to lakes, ponds and brooks. Cold nights move the birds off knolls and side hills down into warmer spots. You will find that certain covers will hold birds every year, just as certain pools harbor fish continually. Your partridge covers should be treated like a pack of hounds. Eliminate one or two each year and add a few to your repertoire.

If you haven't hunted a prospective cover before, look it over carefully and map out a plan before you enter, paying particular attention to the lay of the land. Invariably partridges will fly uphill and head for evergreens. It may require two or three visits to a cover to find out the best method of hunting it. Bear in mind that it is almost impossible to head wild game. Deer will run around beaters; foxes may be temporarily turned when running in front of hounds, but will immediately return to their original line, and coveys of quail will rise and fly directly over the heads of dogs and gunners if the best cover is in that direction. If a grouse beats it for a particular spot one day, you can be reasonably sure he will try to do the same thing the next time you jump him. You should capitalize on your previous observations by changing your tactics. I am quite convinced that partridges have definite flyways. This fact was confirmed when I found dead birds on successive years that had attempted to fly through a glass enclosed porch that had been open all summer. Undoubtedly they had flown through there during the summer and early fall. Grouse paths of flight are not to be confused with the so called crazy season, which is not a subject for discussion in this article.

After you have decided upon the method of hunting a cover, under no condition deviate from your original plan without having a further conference with your partner. Don't say to him once in the cover, "just a minute while I go over here a ways." Such a remark means nothing, and one little circle may lead to another until you are both hopelessly mixed up and in danger of shooting one another if a bird jumps. Proceed at an even pace approximately thirty-five yards apart; and a long and short whistle every few seconds, to be answered by the other fellow in the same manner, will define your respective positions. Being left handed, I prefer to hold my gun with the left hand just below the trigger guard and the butt of the stock resting on my hip. The barrels always point upward if carried in this manner, and the right hand is entirely free to part obstructions ahead. If the cover is open enough so you can walk along holding the gun in a ready skeet position, so much the better. Talking or yelling to one another at any time is a cardinal sin. Partridges seem to have a definite dislike for the human voice. They will run from it and jump way ahead; they are wild enough without this added advantage.



"Occasionally you will run across what I term a creeper."

The question of pace is always a bone of contention. Naturally the country is a governing factor, combined with the individual's ability. Occasionally you will run across what I term a creeper. You can draw your own conclusions as to how he gets most of his birds. His methods are his own business, but most of us hunt birds for the thrill that only a successful wing shot can give. The creeper does not belong to the slow or fast school. I am a proponent of the fast school which does not mean racing through covers. A good even pace should be maintained at all times. By doing so you will not allow yourself to build up excessive excitement within and consequently become tense. You will remain constantly alert and ready for the business at hand. The more good territory covered, the more birds started, and the additional chances afforded will compensate you for the one you might have had if you had been moving at a slower rate of speed.

"I will cast my vote with the no-dog clan."

I think that the generally accepted estimate of one grouse dog in a thousand is highly conservative. I am fond of bird dogs, love to watch them work, and have had the privilege of shooting over one in a thousand. However, when it comes to partridge shooting, I will cast my vote with the no dog clan. There are certain days when grouse will lie well to a dog, but on those same days you can approach the birds more closely too. A good dog will road a bird a long way, and often nail him in a particularly attractive ground cover, giving you a nice shot and dead bird, but this is not common, and if you had not had a dog you probably would have jumped the bird before he reached his haven. Furthermore, you could have covered additional ground which might have yielded more birds. Fine dog work is a "thing of beauty and a joy forever," but a successful snap shot gives me a thrill that can never be rivaled by grassing a bird over a dog. A good retriever is an asset but not essential.

"All weathers are good to those who love the open air."

After shooting at a grouse, keep your eye on it just as long as you possibly can. If you downed him, go directly to the spot where you think he fell, don't wait thinking another bird might get up and you may be lucky enough to get two. Make sure of one first; if it is not at the supposed spot, and there is no wind, stand still and listen for several seconds. If you can't locate your bird running in the leaves, he is probably close to you. Make a thorough search paying particular attention to holes, the base of boulders and brush piles. Another reason for immediately proceeding to the spot where you thought your bird fell is that he may have received a glancing pellet on the neck or head which appeared to knock the bird end over end. If such is the case, the bird will often hit the ground, recover and immediately jump up again apparently unhurt. If the bird goes on after your blessing of two barrels, watch the line of flight for a few seconds to see if any feathers are drifting earthward. Late one evening we were walking along a bank that flanked an alder swale on the edge of which was an old apple tree. The plan was to go to the far end of the run and hunt it back toward the way we had come. This had formerly proved to be the proper way to hunt the cover. My gun was in the crotch of my arm, when a bird suddenly hopped out of the apple tree and headed for the high wooded bank on the opposite side. He was a long shot by the time I swung into action but absolutely in the open. The bird never wavered from his course, and I was silently cursing myself for not being always on the alert, when we noticed a very few fine feathers. The chances of starting the bird again seemed favorable and if plans materialized this time he would go into the old coat. As it turned out, plans were not necessary; the bird was stone dead not ten feet from where we marked it down. He was hit low behind with just three pellets of number nine soft. Unquestionably a number of dead birds are left behind because hunters think they have missed them, and therefore don't follow up. There are fellows who slam at the whir of a wing or the flash of a bird. Unfortunately, this habit is growing instead of waning. The supporting argument always is that, if you don't, you will get "skunked". The results of this practice are dead men, crippled game and a growing aggravation of the farmer sportsman problem. If you just have to shoot where you think the bird is, or where you last saw it, leave it for another day.

What type of weather is ideal for partridge shooting? Rather than answer that question,

(Continued on Page 29)

SELF SELECTION OF FALL AND WINTER

By Winthrop C. Skoglund**

IT has been a common practice on commercial game farms to feed a prescribed grain mixture to semimature ringneck pheasants *(Phasianus colchicus torquatus)* during the fall and winter months. The mixture is usually composed of certain cereal grains, and sometimes legumes, in definite proportions. The wild pheasant eats whatever available feed best suits him. His cosmopolitan feeding habits and dietary likes and dislikes have been reported by several investigators. A review of their findings may be found in previous paper (Skoglund, 1939).

The purpose of the work reported here was to determine the feed preferences of ringneck pheasants wintering under confined conditions. The information made available by such a study should be valuable as a check on recommended grain mixtures and might also suggest improvements or the desirability of allowing birds to select their own grain diet.

Experimental Procedure

Two groups of 8-week-old ringneck pheasants, each group consisting of 50 males and 50 females, were placed in two similar half-acre fields equipped with the usual complement of shelters, feed hoppers, and water fountains. The fields were covered with a dense timothy sod that had been mowed only along the fence and down a few narrow strips through the main portions. Two other groups of 20 birds each, of similar age and sex, were placed in 10-by-12-foot colony brooder houses with wire-floored sunporches attached. All birds had been raised on 28 percent protein all-mash diets as described in Pennsylvania Agricultural Experiment Station Bulletin 389 (1940).

The four groups of birds were fed a 24 percent protein mash during the first 8 weeks of the experiment. Thereafter they were fed the 19 percent protein Penn State Chicken Laying Mash as described previously (Skoglund, 1939).

One field group and one colony-house group were fed the following free-choice grain ration: coarse-cracked yellow corn, wheat, oats, barley, buckwheat, and soybeans. Each grain was fed in a separate compartment of the feed hoppers.

The other field and colony-house groups were fed the grain mixture developed in 1938-39 (Skoglund, 1939). The formula of this mixture is:

Coarse-cracked yellow corn	100 pounds
Wheat	100 pounds
Oats	50 pounds
Buckwheat	50 pounds
Barley	50 pounds
Total	350 pounds

The pheasants were weighed individually on August 7, 1939, when they were selected and placed on experiment, and at 8-week intervals thereafter until they were 32 weeks old. Feed consumption was recorded weekly.

Since the colony-house groups were maintained principally to show whether rigid confinement without access to vegetation and soil would seriously affect the choice of diet of the birds on the free-choice ration, only growth and free-choice selection data are given for them.

Results

Growth.—Table 1 shows the average weights of the birds, based on calculated weighted averages of the sexes. All weight differences were slight and completely insignificant The heavier final weights of the colony-house groups are of interest but of little significance because the number of birds involved was very small.

As it is impossible to select experimental groups composed of birds identical in weight, it is useful to measure weight differences by means of gains as well as actual weights. Table 2 gives the average gains in weight, expressed in both grams and percents. Here differences are again slight and insignificant. The maximum total difference in weight increase was 28 grams, or only 1 ounce.

Feed Consumption. — Feed consumption, calculated on a 100-bird basis, is shown in table 3. This table also indicates the relative proportions of mash and grain, expressed in percent, which were consumed in 4-week periods and during the entire experiment. There was a very rapid shift from mash to grain. In fact, grain-consumption increase was quite noticeable after the first week of the experiment. At the end of 8 weeks, grain constituted more than 90 percent of the total feed consumption. Birds that were fed on the mixed grain ate more mash during every 4-week period, but in six of the eight periods they ate a smaller amount of the total feed consumed than did the birds allowed free choice. The total feed consumed during the 32 weeks of the experiment was 286 pounds less for 100 birds, or 2.86 pounds less for each bird in the grain-mixture group. Though not a large difference, this does constitute an advantage for the grain-mixture system of feeding.

Feed Consumption Efficiency. — Just as simple weights do not always tell the whole story of growth, so feed consumption alone fails to complete the picture of ration efficiency. A composite relationship of feed consumption and growth measures well the use to which feed is put. Feed consumption efficiency, as measured by pounds of feed required to produce a pound of gain, is shown in table 4. It took 2.62 pounds less feed to produce 1 pound of increase in body weight for the birds fed the mixed grains

TABLE 1.—Growth of ringneck pheasants: weighted average of sexes

Feeding system and location	Average weight in grams				
	8 weeks*	16 weeks	24 weeks	32 weeks	40 weeks
Free choice—field	476	971	1140	1144	1164
Grain mixture—field	452	999	1169	1158	1170
Free choice—colony house	496	1015	1116	1139	1298
Grain mixture—colony house	505	994	1117	1209	1288

*Average weights at beginning of experiment.

TABLE 2.—Weight gains of ringneck pheasants: weighted average of sexes

Feeding system and location	Average gains in grams				
	8-16 weeks	16-24 weeks	24-32 weeks	32-40 weeks	Total
Free choice—field	495	169	4	20	688
Grain mixture—field	546	170	-11	11	716
Free choice—colony house	520	101	23	159	803
Grain mixture—colony house	489	123	92	79	783
	Average gains in percent*				
	8-16 weeks	16-24 weeks	24-32 weeks	32-40 weeks	Total
Free choice—field	104	35	1	4	144
Grain mixture—field	121	38	-2	2	159
Free choice—colony house	105	20	5	32	162
Grain mixture—colony house	97	24	18	16	155

*Percent of original weights at beginning of experiment.

*Paper No. 20 from the Pennsylvania Cooperative Wildlife Research Unit. Fish and Wildlife Service (U. S. Department of the Interior), The Pennsylvania State College, Pennsylvania Game Commission, and the American Wildlife Institute cooperating.

Authorized for publication on August 23, 1940 as Paper No. 986 in the journal series of the Pennsylvania Agricultural Experiment Station.

**Now Assistant Poultry Husbandryman, University of Delaware.

ODS BY RINGNECK PHEASANTS*

TABLE 3.—Mash, grain and total feed consumption per 100 birds in field groups.

Age in weeks	Free Choice Mash	Free Choice Grain	Free Choice Total	Grain Mixture Mash	Grain Mixture Grain	Grain Mixture Total	Free Choice Mash	Free Choice Grain	Grain Mixture Mash	Grain Mixture Grain
	pounds				pounds		percent		percent	
8-12	209	100	309	199	80	279	68	32	71	29
12-16	101	230	331	159	209	368	31	69	43	57
16-20	27	326	353	28	333	361	8	92	8	92
20-24	29	383	412	31	361	392	7	93	8	92
24-28	11	425	436	15	319	334	2	98	5	95
28-32	18	420	438	20	366	386	4	96	5	95
32-36	8	491	499	41	342	383	2	98	11	89
36-40	14	409	423	65	347	412	3	97	16	84
Total	417	2784	3201	558	2357	2915	13	87	19	81

TABLE 4. — Feed consumption efficiency: pounds of feed to produce a pound of gain.

Age in weeks	Free choice	Grain mixture
8-16	5.87	5.36
16-24	20.68	20.32
24-32	873.00	loss*
32-40	230.30	265.33
Average	21.04	18.42

*Birds in this group lost an average of 11 grams per bird during this period.

than for the pheasants allowed to make their own choice. Thus the less restricted diet was not utilized so efficiently as the more restricted.

Individual Grain Consumption. — The amounts and percentages of the various grains consumed by the free-choice diet groups are listed in table 5. In both groups the grains were preferred in the following order: corn, wheat, soybeans, buckwheat, oats, and barley. The percentages of soybeans consumed increased in both groups as the experiment progressed, while other grains remained approximately the same. The grain diets that the birds formulated for themselves during the experimental period are presented here, as is the percentage composition of the prescribed grain mixture.

Free Choice

Grain	Field group percent	Colony house group percent
Corn	36.79	40.05
Wheat	34.71	30.78
Soybeans	11.74	13.82
Buckwheat	6.65	12.09
Oats	5.16	1.82
Barley	4.95	1.44
Totals	100.00	100.00

Prescribed

Grain	Field and Colony house groups percent
Corn	28.57
Wheat	28.57
Buckwheat	14.29
Oats	14.29
Barley	14.29
Total	100.01

A comparison of the grain consumption indicates that, if allowed to follow their own inclination, pheasants will eat more corn, about the same amount of wheat, and considerably less oats and barley than are provided in the grain mixture. Further, soybeans, which it takes them some time to desire, are relished if made available. There is no evidence, however, of any advantage in allowing free choice of ingredients if a diversified mixture is provided. It should be pointed out here that representative specimens of all groups, examined by members of the Pennsylvania Cooperative Wildlife Research Unit, were entirely satisfactory, being similar to each other and to wild birds in feathering and physical condition.

Summary

A 32-week fall and winter feeding experiment involving 120 female and 120 male ringneck pheasants showed that:

1. Pheasants allowed free choice of grains while being reared in a holding field regulated their grain diet as follows:

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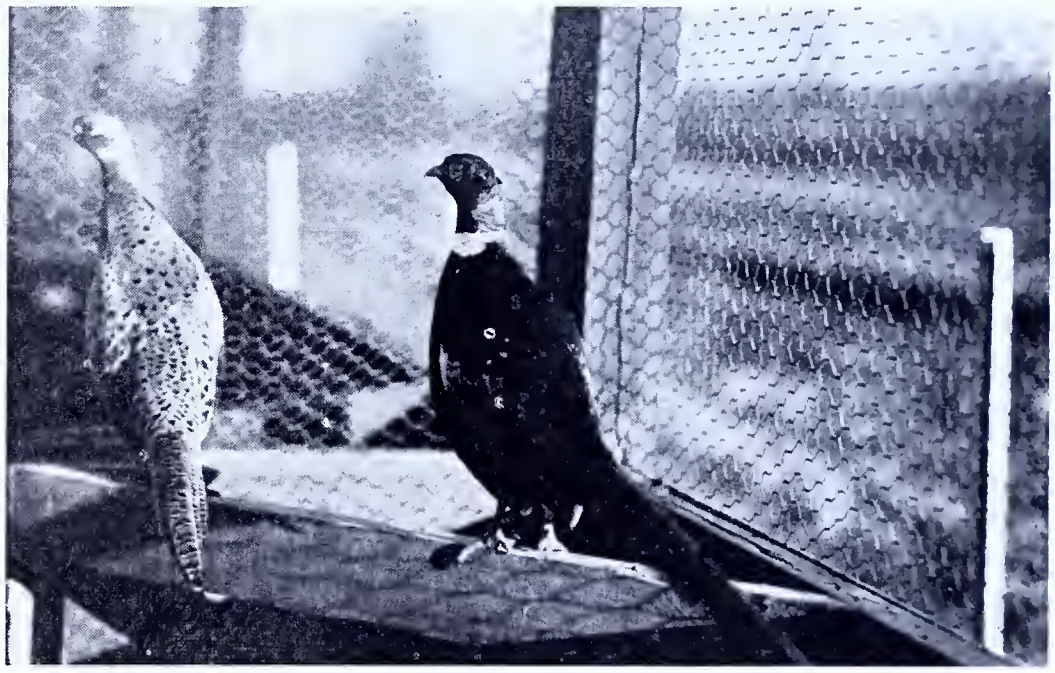

Thousands of ringnecks are released annually.

The ringneck has become a great favorite with most hunters.

SPORTSMANSHIP

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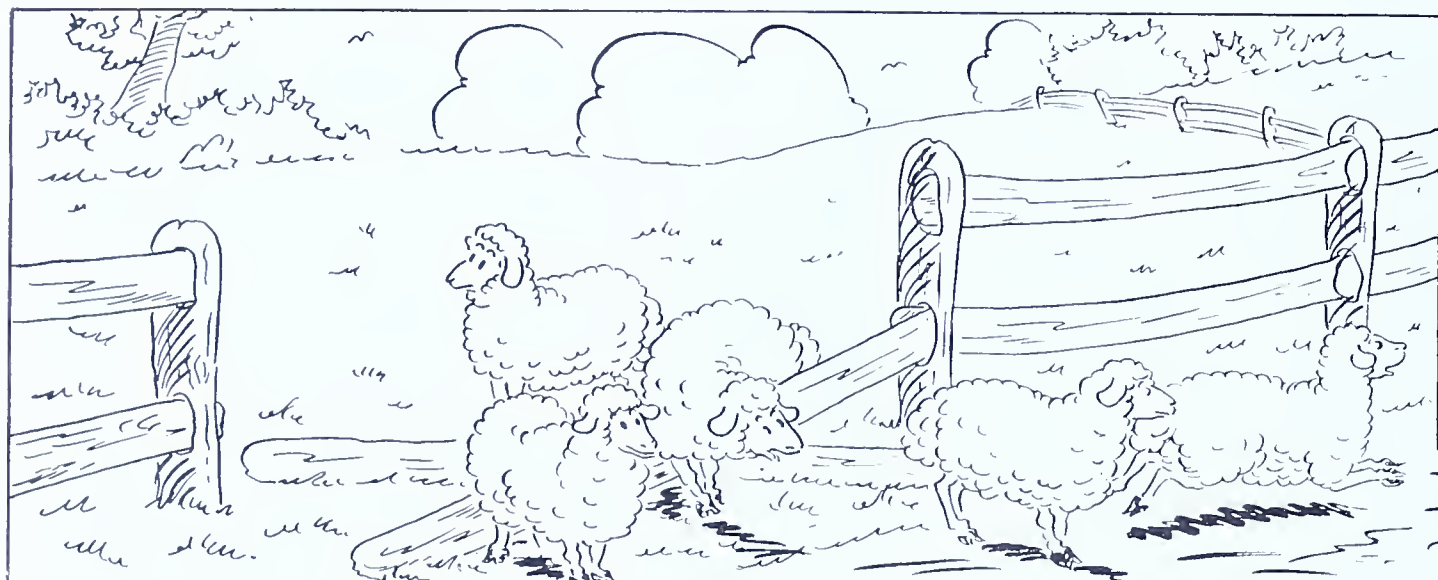
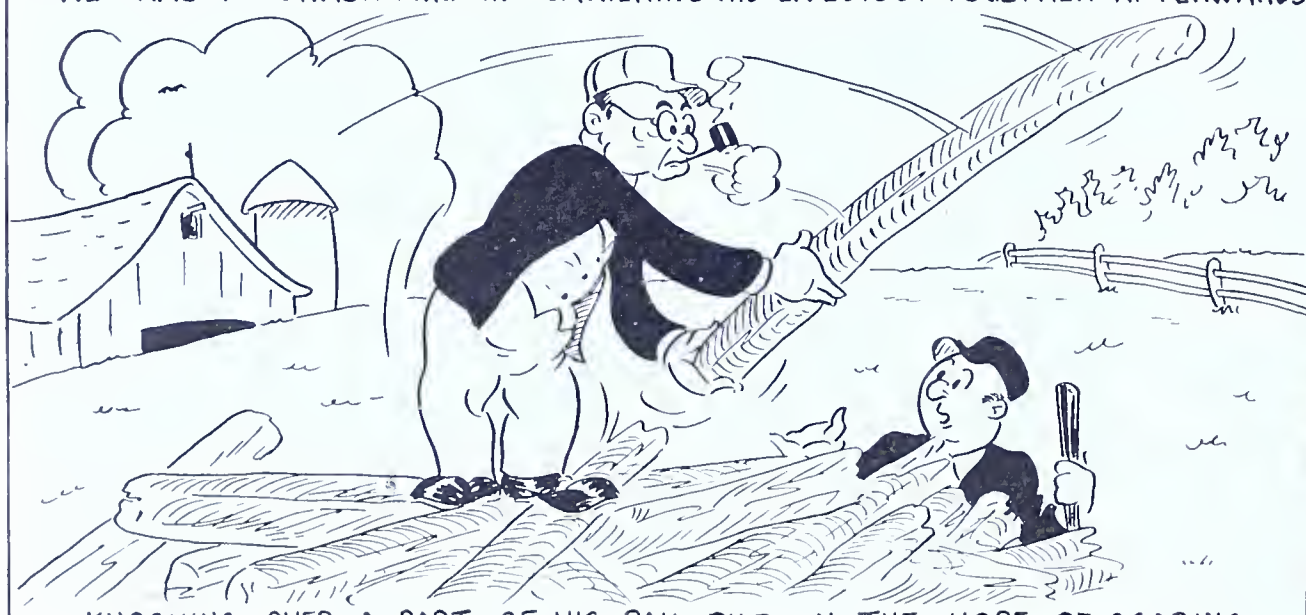
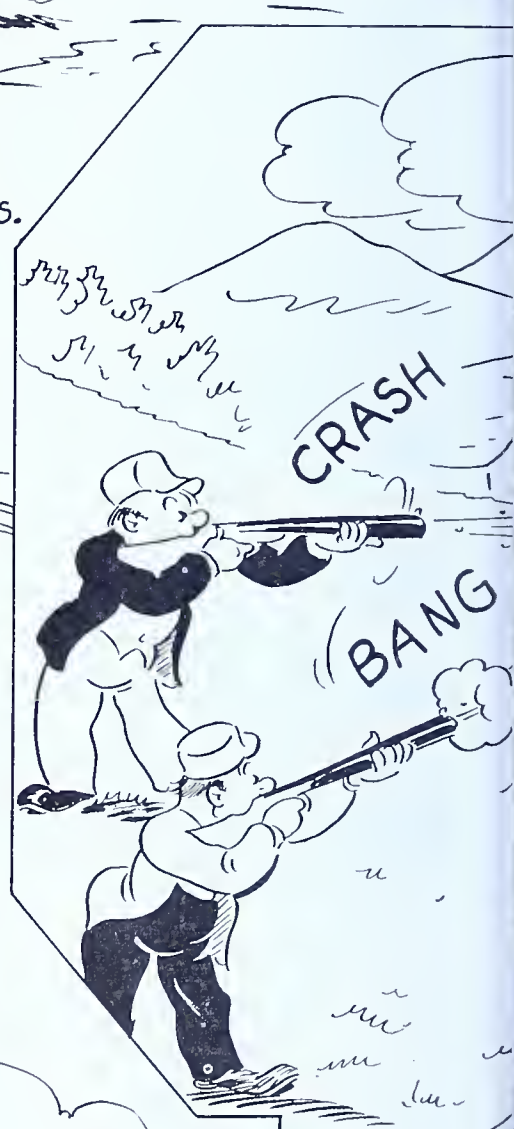


ACTS OF VANDALISM OR CARELESSNESS SUCH AS LETTING BARS DOWN AND FORGETTING TO REPLACE THEM IS ONE SURE WAY OF AROUSING THE FARMER'S IRE; AND IT MAKES HIM DOUBLY MAD IF HE HAS TO CHASE AROUND GATHERING HIS LIVESTOCK TOGETHER AFTERWARDS.



KNOCKING OVER A PART OF HIS RAIL PILE IN THE HOPE OF SCARING OUT A RABBIT CERTAINLY ISN'T GOING TO IMPROVE HIS FEELINGS ONE BIT, EITHER. IT'S ALL RIGHT TO TRY TO CAPTURE A RABBIT THAT SEEKS REFUGE UNDER A RAIL PILE WHEN IT IS CRIPPLED, BUT ONE HUMANE ACT DESERVES ANOTHER SO BE SURE TO PILE THE RAILS UP AGAIN. THE MORE RAIL PILES TORN DOWN AND NOT REPLACED THE LESS TERRITORY EVERYONE WILL HAVE TO HUNT UPON IN FUTURE YEARS.



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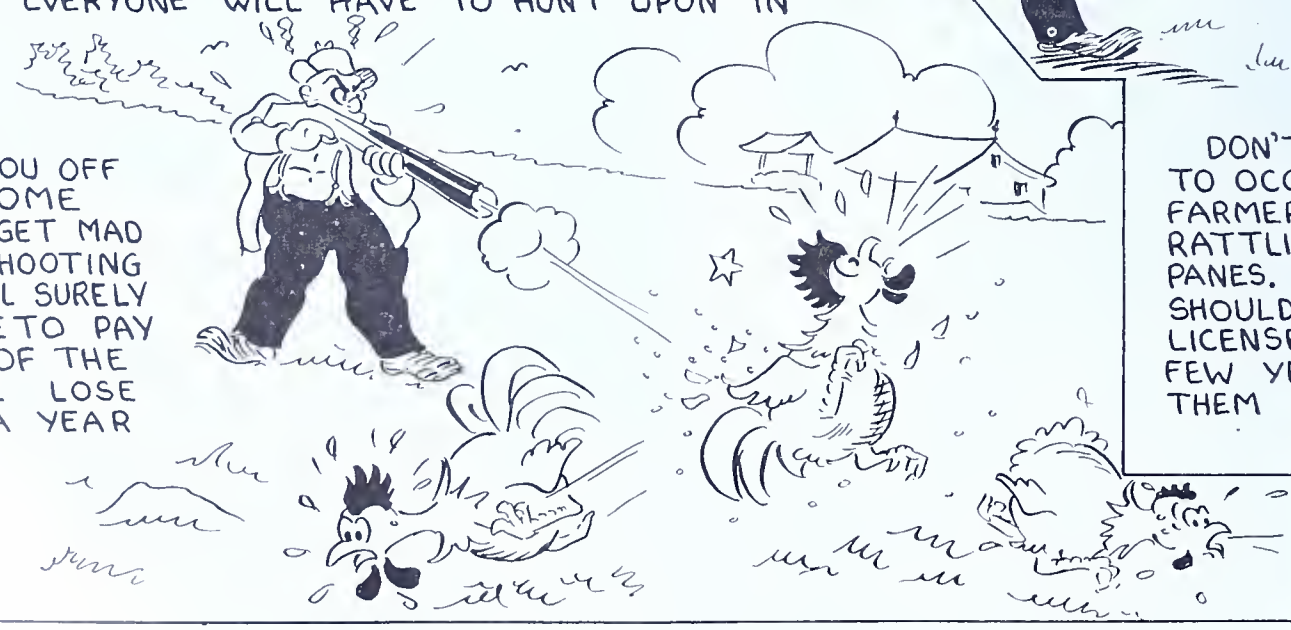
IF A FARMER CHASES YOU OFF FOR COMMITTING SOME DEPREDATION, DON'T GET MAD AND RETALIATE BY SHOOTING HIS CHICKENS. YOU WILL SURELY GET CAUGHT AND HAVE TO PAY A FINE, THE COST OF THE CHICKENS, AND MAYBE LOSE YOUR LICENSE FOR A YEAR OR SO TO BOOT.



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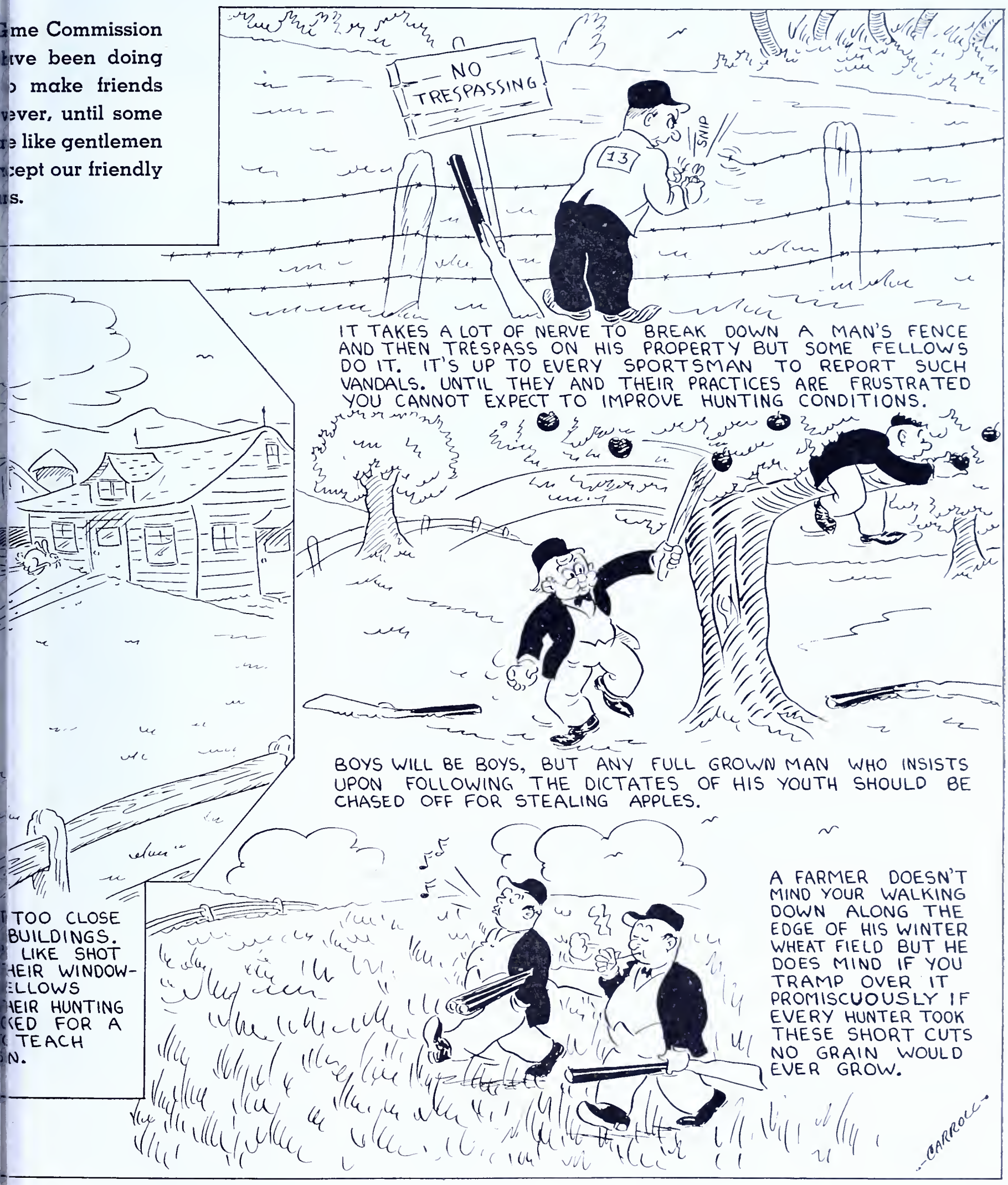

Deputy Protectors Get Training

DEPUTY PROTECTORS GET TRAINING

In order to better train and acquaint Deputy Game Protectors in Division "E" with the activities of the Commission, District Game Protectors have been instructed to hold at least two official business meetings with these officers each year at some convenient place in their respective districts. This plan has been very successful this year, and the Deputies have been grateful for the help it has given them.

On August 4 a meeting of this kind was held by District Protector Edward L. Shields at Burglund's Camp, Big Mill Creek, in the National Forest area of Elk County. It was an outstanding meeting because everybody expected to attend was there and the program was successfully carried through.

The Game Code was discussed in a round table conference, being interpreted by the officers in charge. An address was delivered by Field Division Supervisor M. E. Sherman on the conduct of officers of the law, particularly as it pertains to game protectors. It was instructive, illuminating, and well taken by all officers present.

After the business meeting a pistol shoot was conducted by Game Protector Theodore C. Carlson, who instructed the officers on the care, use, and need of the side-arm. Prizes were given for ratings.

The following regular officers attended the meeting: District Protector Edward L. Shields in charge; Protector Theodore C. Carlson, assistant; Field Division Supervisor M. E. Sherman, visitor and speaker; Game Protector William J. Brion, visitor; Game Protectors Lynn B. Rosenkrans and Elmer J. Turner assisted with the activities. Fish Warden Robert J. Crissman of Mt. Jewett, McKean County, attended and participated in the meeting; and last but not least the following named Deputy Game Protectors from Elk County attended:

Burton Steis, Brandy Camp, Pa., Francis G. Brehm, Kersey, Pa., Milford Marsh, Wilcox, R. D., Pa., Lloyd Sallack, Johnsonburg, Pa., Clarence Wensel, Johnsonburg, Pa., Richard Eaton, Ridgway, Pa., J. Eldon Leidwinger, Ridgeway, Pa., George Berry, Benezett, Pa., Clifford Nichols, Wilcox, Pa., Paul Auman, St. Marys, Pa., and David Oldani, Byrnedale, Pa. The Commission greatly appreciates the interest shown by these officers.—M. E. Sherman, Field Division Supervisor, Division "E."

NEW APPOINTMENTS

New appointments announced by the Commission recently included one for the office of Field Division Supervisor in Division A, a position which has been vacant since the death of the former supervisor, Frank A. Myers, and seven regular appointments of certain per diem employees, all students of the Commission's Training School to various field positions.

Merton J. Golden of Reading was appointed Field Division Supervisor for District A, having earned that promotion by having been high man in competitive examinations held for the position. Mr. Golden began service with the Commission as an Assistant Game Protector on December 16, 1935. Later he served as Traveling Game Protector, District Game Protector, and on March 9, 1940, was appointed Acting Supervisor of Division A. Mr. Golden also served as a Deputy Game Protector prior to his official affiliation with the Department in 1935.

Student officers who were maintained on a per diem basis in various field positions following their graduation, and who were recently appointed regular salaried employees include:

Samuel K. Weigel, Zelienople, to be District Game Protector, Luzerne County, with headquarters at Kingston; Donald E. Miller, Hydetown, to be Game Protector specially assigned, with headquarters at Hydetown, Crawford County; Peter J. Filkosky, to be Game Protector specially assigned, Scranton, with headquarters at Coaldale, Schuylkill County; Levi R. Whippo, Wilcox, to be Game Protector specially assigned, with headquarters at Tidioute Warren County; Anthony J. Zaycosky, to be Game Protector specially assigned, headquarters at Vandergrift, Westmoreland County; Raymond M. Sickles to be Game Protector Land Management with headquarters at Linesville, Crawford County; and Elmer J. Turner, to be Game Protector Land Management with headquarters at Mehoopany, Wyoming County.

President Roosevelt recently signed an Executive order designating 252 refuges administered by the Fish and Wildlife Service as National Wildlife Refuges. The order affects all but 12 of the areas in the 13,635,000-acre system of bird and mammal sanctuaries that extends from Puerto Rico to Alaska and Maine to Hawaii.

The result of a survey conducted recently in Missouri shows that school children are more interested in birds than they are in people. Asked to check the subjects in which they were most interested 81% placed birds at the head of the list. Next in order they placed game animals, flowers ,trees, fish, furbearers, soil, people and water.

A few weeks ago Michigan began an unique course in conservation education. The school which will travel by auto over the upper peninsula and cover 1,200 miles in the ten days of its duration will have enrolled only teachers of nature study, biology and conservation subjects. The teachers will be taught by the technicians in charge of the various stations and points of interest visited on the tour. There will be no stopping at hotels or tourist cottages. Each night tents will be pitched and supper cooked over red hot coals. The courses and tour are under the sponsorship of the Western State and Central State Teachers Colleges of Michigan. This might be a fine suggestion for our State Federation to look into.

Judge Miller Presents Tract of Land to the Commission

JUDGE MILLER

The Hon. David Martin Miller, former Judge of Allegheny County, residing at Glenshaw, Pa., offered to present as a gift to the Game Commission and sportsmen a tract of land containing 65.8 acres, situated near Glenshaw, Allegheny County, for use as State Game Lands. His generous offer was accepted with appreciation and gratitude by the Commission at its meeing July 11, 1940. In all probability title will have been conveyed to the Commission by the time this account appears in print.

When advised of the Commission's acceptance of the gift, Judge Miller wrote Executive Director Gordon a letter which is indicative of his public-spirited attitude. A portion of his letter is here quoted:

"I was very much pleased to learn that the offer of the tract of land at Glenshaw to the Game Commission of Pennsylvania for propagation and conservation purposes was accepted by the members of the Commission. Judging from the kindly and appreciative spirit of your letter, it must have been accepted by the members with appreciation and with thought that it will be useful for the purposes for which it is given and accepted. I am pleased to give the land to Pennsylvania and am as much gratified to give it as the Commission seems to receive it.

"I hope it will be the means of giving to sportsmen and lovers of the outdoors much joy and pleasure.

"Please thank every member of the Commission for me."

This letter typifies Judge Miller's breadth of vision and public spirited attitude.

Judge Miller always maintained a keen interest in civic affairs having been elected a member of the School Board of Shaler Township upon reaching his majority. Subsequently having removed to the City of Pittsburgh he was elected as an Independent Republican to the Select Council of that city.

He served as Assistant United States District Attorney under D. B. Heiner during the McKinley administration and during the Roosevelt administration under James S. Young, later a Judge of the District Court.

In 1903 with Messrs. Young and Reamer he formed the partnership of Young Miller & Reamer and engaged in the practice of law until Judge Young was appointed to the Common Pleas Court. Afterward he served as Assistant District Attorney for Allegheny County under William A. Blakeley.

When the County Court of Allegheny County was created by Act of Legislature D. M. Miller was one of the Judges appointed by Governor Tener in June 1911. In November of that year he was elected for a term of ten years and again for a second term in 1921. At the close of his second term in January 1932 he retired from active service to live at his country home near Glenshaw in Shaler Township, within two miles of his birthplace. There with his flowers, fruit trees and the birds he has attracted to his grounds he has lived the life of a country gentleman.

Judge Miller has always taken an active interest in the outdoors and camping. With his automobile trailer, moving picture camera and field glass he has been able to follow his outdoor pursuits with large interest to himself and his many friends. As a member of the Western Pennsylvania Audubon Society he has served the society in various important capacities.

Judge Miller was married to Olive Laughlin, formerly of Indiana, Pennsylvania, who with his daughter Elizabeth, a teacher in the Pittsburgh High Schools, and his son David share with him the pleasures of rural life.

Although definite plans have not yet been made, it is probable that the tract will be used as a Game Propagation Area wherein no hunting will be permitted, but from which game may be trapped for stocking areas open to public hunting in Allegheny and other nearby counties.

All members of the Commission for themselves and sportsmen are pleased to make this public acknowledgment of Judge Miller's generous act, and to extend to him the sincere appreciation which he so justly deserves.

A view of the tract of land Judge Miller is presenting to the Sportsmen of the State.

WARNING

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The Pennsylvania Game Commission has been informed that a person purporting to be "S. A. Smith", age between 43 and 45 years, black hair, dark brown eyes, 5'9" in height, weighing about 165 lbs., and alleging to be an agent of the Smith's Artists Attractions and an advanced agent for Barker Brothers Rodeo, recently committed fraudulent practices in New York State, in connection with proposed sportsmen's activities.

We are informed that this individual contacted a sportsmen's organization at Port Jervis, New York, and after making many promises to operate a cooperative sportsmen's show, in which the sportsmen's organizations were to share the profits, collected money under false pretense. In addition, Smith is alleged to have issued several worthless checks in connection with his activities in New York State.

Subsequent investigation, we are informed, indicates that Smith has no connection whatsoever with Barker Brothers nor any other similar organization.

This warning is issued to sportsmen's organizations or individuals in this Commonwealth who may be approached in a similar manner, in order that they may not be defrauded similarly.

CURRENT TOPICS

The Meyersdale Sportsmen's Association, a newly formed Somerset County wildlife club was responsible for the display shown above which was exhibited at the county fair this year. The center of attraction constituted a metal tank holding several large brook trout, one of Pennsylvania's native fishes, and the expense of putting on the show was defrayed by chanceing off a fine shotgun.

A county fair being the ideal place for sportsmen to meet and discuss common problems with farmers, the Meyersdale club secured leaflets of several kinds from the Game and Fish Commissions to hand out to those interested, and hunting season being just a few months away, the raffling off of the gun proved to be a financial success.

When local landowners learned that the sportsmen's group was propagating fifty ringneck pheasants for distribution in home territory, they pledged their support to the club and promised full cooperation with its members.

Up to this time the Meyersdale Sportsmen's Association has confined its efforts to forming a strong organization, affiliating with the Pennsylvania Federation of Sportsmen's Clubs and seeking better relations with nearby groups. By choosing the county fair as their "coming out party", however, Meyersdale wildlife enthusiasts launched an active program to teach forest and game conservation and to stop the pollution of county streams.

Committee members who spared neither time nor effort in making the fair display a success are: Harold Hoar, Lee Imler, Dave Weisel, Paul Christner, Merle Tressler, Donald Reis, Dave Ellis, Artha Shumaker and John Livengood.

FEDERAL AID PROJECTS

The New York Conservation Commission has submitted plans to plant 400,000 trees and shrubs on eighteen State-owned areas. Besides being of benefit to wildlife the plantings are designed to arrest erosion, conserve soils and will be of potential forest value.

A project to improve a Game Preserve for migratory waterfowl is contemplated by the Kansas Forestry, Fish and Game Commission. The area is now known as the Republic County State Park but the name will be changed to Game Refuge. The chief wildlife feature is a seven hundred sixty-five acre lake on Salt Creek. Heavy evaporation in the dry months and leaks in the timber dam at the lake outlet are impairing the effectiveness of the water body for waterfowl. The purpose of the project is to seal the leaks in the dam and place an earth blanket above the structure to prevent ice damage in the winter.

As the fourth segment of its acquisition program in the Sinlahekin Deer Winter Range, the State of Washington Game Commission has completed negotiations and optioned an additional 1250 acres. This brings the total lands acquired and being acquired in this area to approximately 5,000 acres.

The Wisconsin Conservation Commission plans a survey of the status of the ringnecked pheasant in that State. Wisconsin is an important pheasant-producing State, having a reported annual kill of more than 500,000 birds. They plan to study the mortality of propagated birds which are released at ages of 7, 8, 9, and 10 weeks under various environmental conditions and with or without artificial feeding and watering, making a comparison with wild stock. The Commission also plans to determine the value of small refuges, winter feeding artificially and in food patches as well as to gather other pertinent information to determine management methods adaptable to Wisconsin conditions.

Wisconsin is also providing for a survey of the deer situation. An interesting phase of the investigation will be the study of the effectiveness of deer refuges in an effort to determine the best size, location, and essential requirements under Wisconsin conditions.

The Charleroi Police Department has declared war—on starlings. One interested resident referred to a dictionary to find that the starling is described as a sociable bird. In his complaint to the police was worded to the effect that having been kept awake nights he had decided he didn't care to have the birds so sociable.

The Wildlife Area on the Federation of Women's Clubs State Forest in Worcester County, Massassachusetts, will be developed for rabbits, deer, and ruffed grouse by the Department of Conservation. Work to be done will include brushing and marking boundries with signs, erecting a single strand wire to prevent trespass, and type mapping and the formulation of a work plan for the future.

The New Mexico Department of Game and Fish received approval to purchase three contiguous tracts of land in Sandoval County for a feeding and nesting area for wild turkeys, ducks, muskrats, beaver, and deer.

The three tracts, together with a fourth piece of land which the U. S. Forest Service will convey to the State in exchange for land elsewhere, will make a refuge of 267 acres. In addition to these lands, the U. S. Forest Service will exclude grazing on an adjacent section of land so the refuge will be enlarged.

The refuge will have a diversity of cover including woodlands, grassy meadows, a marsh, and cut-over brush.

The Minnesota Department of Conservation proposes to post 114 State game refuges. While the refuges are all privately owned the Department of Conservation under State law is authorized to designate them as refuges and control the wildlife thereon. The various areas range in size from 640 to 100,000 acres and will be marked with embossed metal signs supported by steel posts.

The Ohio Division of Conservation and Natural Resources plans a state-wide wildlife survey and game management project. Work under the project will be divided into three categories; inventory of species and influencing factors, determination of methods of conservation and restoration, and demonstrations of game management.

For the purpose of the project, the State has been divided into seven geographical and ecological regions. An assistant leader will be assigned to each region and the entire program will be directed by Edwin P. Rinehart, who has been appointed project leader.

Ohio State University, Ohio University, and other educational institutions, have been named as agencies which will furnish technical information. The Soil Conservation Service, the C.C.C. and the U. S. Forest Service will act as cooperators.

The Ohio Division of Conservation and Natural Resources proposes the establishment and development of a sanctuary for ruffed grouse. The sanctuary will be fenced and adequately posted. The cover on two-thirds of the lands involved is comprised of older age class hardwoods averaging 40 to 60 years of age. Approximately one-third of the area supports young hardwoods (5-30 years old), interspersed at frequent intervals with young coniferous growth. Small abandoned fields (homestead sites and old orchards) are scattered throughout the young hardwood stand. The area will be maintained as an absolute sanctuary for a period of at least five years.

CURRENT TOPICS

Although the duck population in New Hampshire is comparatively small, the Fish and Game Commission feels it may be increased by developing some of the State's ponds and lakes. The State proposes to determine the species of ducks nesting, the relative numbers and distribution of each species, and to make a chemical analysis of the soils and waters in selected lakes to determine their adaptability for such development. From the information gathered the department will formulate management plans for ponds and lakes offering the greatest promise.

The Michigan Department of Conservation has recently completed negotiations to purchase approximately 1,800 acres of land suitable for wildlife purposes in the southwestern part of the State. No large scale development program is contemplated at this time, although required food and cover management will be undertaken to improve conditions for rabbits, pheasants, waterfowl and other species.

The Idaho Fish and Game Commission believes that the protection and reclaiming of waterholes constitutes one of the best development activities possible for the restoration of sage grouse and other forms of desert wildlife. It has presented plans for the development of two natural springs known as Monument and Granite Springs in Owyhee and Twin Falls Counties.

Tourists on the Lincoln Highway between Bedford and Everett were quite interested and amused at the antics of a large black bear that evidently strolled down to look over the main street of America. Out of the brush he came, ponderously plodding to the edge of the well-known but bumpy macadam surface. After peering thoughtfully at the road for a minute or so he disdainfully shook his head and trotted back across the field to a small clump of trees.

Food habits of the Fish and Wildlife Service examined the stomach contents of more than 1,600 individuals of 5 kinds of shorebirds to determine the food requirements of these feathered creatures. On the basis of these studies, members of the Section of Food Habits, Division of Wildlife Research, said that the diets of the woodcock, Wilson's snipe, American knot, and Eastern and long-billed dowitchers include more than 85 per cent animal matter.

Approval has been granted the Illinois Department of Conservation to improve the Horseshoe Lake Refuge in Alexander County for Canada geese, waterfowl, and upland game species. The area is one of the most important wintering grounds of Canada geese on the Mississippi flyway. Seventy acres of former farm land which have reverted to scrub growth will be cleared and planted to goose foods.

H. C. Gascon and Levert Bird of Addis, Louisiana, caught and banded 50 woodcock during January of 1937 and fifteen during January of 1939. From this modest beginning some interesting returns have already been received. Of seven woodcock banded on the night of January 7, 1937, near Sherburne, one was killed on November 14, 1938 at Chipman's Corner, Nova Scotia, Canada. Of eight birds banded on the night of January 14, 1937, near Lottie, one was killed on October 2, 1937, near Martinsburg, N. Y., and another was killed on October 29, 1938, near Sloansville, N. Y.

MUSK OXEN REESTABLISHED IN ALASKA

In 1930 the Biological Survey placed an order with an experienced collector in Greenland for delivery in the United States of an initial herd of musk oxen for transportation to Alaska. In 1931, 15 males and 19 females of musk oxen from this purchase were introduced into Alaska, where they were confined in a pasture near Fairbanks, and careful study made of them until 1936 when 4 of them were transferred to Nunivak Island. The following year, the balance of the herd, 27 animals, was also placed on Nunivak Island. As a result of this effort to reestablish musk oxen in Alaska, the Survey reports for 1939 that the herd has increased to 50 animals.

The Indiana Department of Conservation will use Federal Aid funds to improve the Hovey Lake game refuge for migratory waterfowl and resident upland species. Work proposed under the project includes the construction of a caretaker's cottage and service building, the building of an entrance road, the erection of a concrete dam to maintain constant water levels in the lake, and fencing and posting the boundaries.

The Game News has learned of a novel method whereby train crews can help in a winter feeding project, especially those who man freight trains through mountainous districts. The idea comes all the way from Texas where a freight crew rounded up the tramps riding on their train and forced them to sweep empty grain cars at likely spots where game would congregate.

"While talking with the caretaker of the Renovo Reservoir on Drurys Run, I learned the reservoir had been leaking for some time and that they were unable to stop it with the use of six or seven tons of cement. During the past summer three beavers moved into the reservoir and have stopped the leak which had been causing the trouble."—W. J. Brion, Clinton County.

All Game Bird Breeders will be interested in the preliminary studies made at the Patuxent Research Refuge, Bowie, Md., on cannibalism among adult bobwhites indicating that a deficiency of common salt in the diet is one of the factors, if not the main factor, leading to the vice. Outbreaks of toe pecking occurring among mature quail on diets containing no salt to 0.5 percent salt, were stopped in 24 hours by an increase of the salt content to 2 to 3 percent. Even fighting was checked by raising the salt content to 5 to 6 percent for several days. Salt levels of 4 or 6 percent apparently have no deleterious effects on mature quail held during the winter, even when fed for several months.

The Wisconsin Conservation Commission plans to use a portion of its Federal Aid in Wildlife Restoration funds to make a survey of the deer situation in Wisconsin.

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Carl C. Rosser, left, and Hon. Samuel C. Castner, Member of the Game Commission, both of Williamsport, holding a pair of the Commissioner's dogs—the first to be registered under the new dog registration plan approved by the Federation.

THE RHYME OF THE RABBIT HOUND

The rabbit hound rested beneath a tree,
And in his peculiar canine key
This is the song he sang to me.
I can run down any rabbit
Years ago I got the habit,
I can run it down and grab it every time.
Once I have the scent I keep it,
When a fence looms up I leap it,
When a hill's too steep to creep it I can climb.
Now and then my master
Thinks that I should travel faster
Tho I'm clinging like a plaster to the scent.
It's a scent he couldn't follow
Over hill and over hollow
Without falling down and crawling to his tent.
Near some tree I leave him standing
With his attitude commanding
And his heavy chest expanding in his pride.
He's a tough guy and I fear him
So I drive the rabbit near him
For he couldn't make a long shot if he tried.
After plugging little bunny
Master's temper grows more sunny
And he figures out some funny joke to spring.
I'm the guy that got the rabbit
Up so close that he could stab it
Or reach right out and grab it with his wing.
Service, as the wise have stated
Seldom is appreciated
And in vain have millions waited to be thanked.
Up and down our noble nation
Mortals crave appreciation
From a lot of spoiled brats that should be spanked.
That's my boss, a big spoiled brat
Head too puffy for his hat
How I wish you'd tell him that the day you meet him
Either he was much more mild
When he was a little child
Or his father never had the time to beat him.
Many times I've thought it over
While a-sniffin' thru the clover
Trailing down some furry rover to his fate.
I'm the guy that brings the rabbit
Up so close the boss can grab it
And the boss—well he's the guy that thinks he's great.
It's an odd world that we live in,
Fine to smile in, fine to give in,
But a hard boiled world in which to get your share.
For some word of praise I've panted
Master takes it all for granted
While I've slaved and galivanted here and there.
I've been making good for years
Running rabbits to their biers
But no praise rings in my ears when I've succeeded.
Mortals praise with tongue or pen
Useful dogs or useful men
But don't seem to want them 'round unless they're needed.
The rabbit dog paused he had sung his bit
But he said a mouthful before he quit
The more you do for many a jay
The more they expect on the following day
Since Adam accepted forbidden food
We've all been in a receptive mood.

—E. C. Pleger, Erie, Pa.

From a sportsmen's magazine (unknown) published some years ago.

HUNTERS MAY ENTER CANADA WITH THEIR HUNTING EQUIPMENT

New Regulations Established Under Which Tourists May Bring Firearms to Canada For Hunting.

By Order-in-Council passed under the authority of the Defense of Canada Regulations sometime ago, aliens were not permitted to carry firearms in Canada or have them in their possession.

As all tourists visiting Canada fall within this category, the hardship, imposed on many welcome visitors whose habit it has been for years to shoot in Canada's hunting grounds annually, has been removed by an amending Order-in-Council which grants authority to the Commissioner of the Royal Canadian Mounted Police to grant individual permits.

The new regulations provide that intending hunters or others who wish to bring their firearms to Canada (and a reasonable supply of ammunition therefor) are required to apply in advance by letter or wire to the Commissioner of Customs or the Commissioner, Royal Canadian Mounted Police, Ottawa, giving name, address, occupation, purpose and duration of visit, destination in Canada, description, make and serial number of each firearm and the Canadian frontier port of arrival.

This application should be supported by suitable references. The bona fides of the applicant having been satisfactorily established, a permit will be forwarded to the Collector of Customs at the Canadian frontier port designated in the tourist's application, by whom it will be delivered to the tourist on his arrival.

Guns admitted under this arrangement must be exported. Ammunition imported for use therewith will be dutiable. No permits will be granted for automatic firearms nor will firearms or ammunition be admitted as traveller's samples. The firearms permit issued by the Royal Canadian Mounted Police will not operate as a hunting permit, which must also be obtained from the Provincial authorities as usual.

Visitors who arrive at the frontier with firearms for which no firearms permit has been obtained in advance from Ottawa will have to leave their guns at Customs until the requisite permit has been obtained, unless they are willing to wire their application with full particulars and allow their firearms to go forward by express in bond to the Customs port at or nearest their destination to which they may also proceed and to which the permit if and when granted will be mailed.—Westfield Free Press.

WITH THE CLUBS

Harrisburg and Cumberland County sportsmen held a joint two-day Field Meet recently at Hempt's Meadows near New Cumberland. The photos on this page show some of the activities. An archery tournament was one of the features. The young lady at the left of the contestants shown below is Miss Martha Schauer, an employee of the Game Commission; the others are H. W. Morris, Geraldine Dibeler, and Bertha Drebelbis.

For an organization that is only 18 months old the Shippensburg Fish and Game Association certainly has shown itself to be an up and coming bunch of sportsmen. Among it's accomplishments is a ringneck pheasant holding pen large enough to accommodate 300 pheasants and a ten acre field in which is installed a clay pigeon trap and rifle range. However, the highlight of the club's activity is the fine feeding program it conducts during the winter. A special feeding committee is appointed and through its efforts the local Boy Scouts and other youth organizations participate. Another important event is conducted by a game committee which contacts farmers in the vicinity in an effort to have them cooperate in tree planting programs and the leaving of shrubs and game covers along their fence rows. In return the committee, backed of course by the organization, pledges to the farmers that it will do everything in its power to protect them from the depredations of hunters.

The Zelienople Sportsmen's Club, Zelienople, Pa., recently sponsored a fine wildlife exhibit which proved to be one of the most popular displays of their Sentennial Fair. The Zelienople Club is very active in the western part of the State and recently acquired an Auxiliary Farm-Game Refuge containing approximately 3,000 acres.

Work on the construction of a large pheasant pen is well under way, according to Dr. Steven G. Naylor, Chairman of the York and Adams County Game & Fish Association's Game Committee.

FALL FIELD TRIALS

The Pennsylvania State Fox Hunters Association will hold its Annual Field Trials and Bench Show at Fawn Grove, in York County, October 21 to 25 inclusive. The largest attendance ever had at any Fox Trial in Pennsylvania is expected and all entries are assured of wonderful sport.

The Anthracite Field Trial Association will hold its second Annual Field Trial at Orwigsburg on October 19 and 20. All entries must be in the hands of Secretary James Lengel, Orwigsburg, before October 18. There is a special Trophy Award for the two best Schuylkill County Shooting dogs.

The Shamokin Valley Field Trial Association will hold its annual fall trials on Saturday and Sunday, October 12 and 13, at its club grounds at Elysburg. Saturday's stakes will include an open puppy, open derby and open all-age. The members' Amateur Shooting Dog stake will be run on Sunday. For further information contact Floyd E. Shawda, 224 So. 6th Street, Shamokin.

SPORTSMEN'S QUERIES

By CHAS. F. STAMBAUGH

REPEATING SHOTGUN FOR SMALL GAME

Q. Is it permissible to use six shells in a .410 gauge bolt-action shotgun for small game hunting?

A.D.—McKeesport, Pa.

A. No. The use of six shells in a .410 or any other repeating shotgun is strictly unlawful for hunting any wild birds or wild animals in this State, except big game. In hunting native small game, your gun need not be plugged, but no more than three shells may be carried in the magazine and chamber combined. In hunting migratory game birds, such as woodcock, wild ducks, geese, etc., a repeating shotgun must be plugged or otherwise restricted to a capacity of three shells.

* * *

REGISTRATION OF RIFLES AND SHOTGUNS

Q. Is it compulsory to register my rifle and shotgun? If so, where can I have them registered?

A.A.L.—Mt. Lebanon, Pa.

A. It is unnecessary to register a rifle or shotgun under existing law, unless the rifle has a barrel less than fifteen inches and the shotgun has a barrel under twenty-four inches. In that case, both guns must be registered with your County Treasurer to be transported for hunting purposes. The fee is fifteen cents. We understand there is legislation pending in Congress to require all rifles and shotguns to be registered, but up to this time, it has not become law.

* * *

PUMP GUNS FOR DEER HUNTING

Q. How many shells may you put in a pump shotgun for deer hunting? I know of the three-shell limit for rabbits.

J.B.—Emeigh, Pa.

A. A pump shotgun used for deer or bear hunting may be loaded to full capacity when legal ball shells are used. The three-shell limit on repeating shotguns does not apply to the hunting of big game.

* * *

POSSESSING SKUNKS ALIVE

Q. Am I permitted to catch skunks now and keep them until the pelts become prime before killing them?

H.S.—McConnellsburg, Pa.

A. Yes. Protection has been removed on all skunks in Pennsylvania until midnight, September 30, 1941 and we see no objection to keeping skunks alive in captivity indefinitely after they have been legally taken. Skunks so taken may be killed any time prior to October 1, 1941.

THE 1931 DEER SEASON

Q. In 1931 when both bucks and does were open to shooting and spike bucks were protected, was the season open only in certain counties or was it State-wide?

J.G.W.—Weedville, Pa.

A. During the 1931 deer season, which was December 1 to 15, all counties in Pennsylvania were open to the killing of all deer except fawns weighing less than 40 pounds with entrails removed, and spike bucks regardless of weight. Records of the Game Commission do not indicate that any counties were closed to deer hunting that year.

* * *

TRANSPORTING A SHOTGUN

Q. Will you please answer this question in the Game News: Is it legal to carry a shotgun in a car at all times, if you are not going hunting, just to and from work or pleasure?

G.L.—Berkshire Heights, Pa.

A. The Game Law does not prohibit one from carrying an unloaded shotgun in a car at any time, regardless of how it is carried. However, if the barrel is less than twenty-four inches in length, a special permit under The Firearms Act is necessary to transport the gun.

* * *

LICENSE FOR WOODCHUCK HUNTING

Q. How long has a hunting license been necessary to hunt woodchucks?

I.E.B.—Cambridge Springs, Pa.

A. Since May 24, 1923. The hunter's license law actually went into effect on April 17, 1913 in Pennsylvania, but under this law a license was required only to hunt wild birds and animals protected under the laws of the Commonwealth. In 1923 the Game Laws were revised to require a hunter's license to hunt any wild birds or wild animals, including the unprotected species. Woodchucks were given protection on June 3, 1937.

* * *

SMALL RIFLES FOR DEER HUNTING

Q. What is the lowest caliber center-fire gun one may use for deer?

C.G.B.—West Newton, Pa.

A. No minimum is specified as to the size of center-fire cartridges that may be used for deer hunting. The law merely states that no .22 or .25 caliber RIMFIRE cartridge may be used on big game, which we assume means that any size center-fire cartridge may be used. However, any load of insufficient power to bring down and humanely kill a big game animal should never be used.

TRAPPING WITHOUT LICENSE; TAGGING TRAPS

Q. Does a person over the age of sixteen need a hunting license to trap? Is it legal to set steel traps without name plates when the name and address is stamped on traps?

D.E.—Valley Forge, Pa.

A. The Pennsylvania Game Law permits persons under the age of eighteen years to trap for fur-bearing animals or predators without a hunter's license. They are, however, required to observe the same trapping laws as are in effect for the licensed trappers. We would not consider it legal to merely stamp your name and address on traps, as the law definitely requires traps to be marked with a metallic plate or tag, bearing in plain English the name and address of the owner. Your traps must be tagged rather than stamped.

* * *

GUN FOR DOG TRAINING; TRESPASS

Q. (1) Is it legal for one to carry and shoot a gun over a dog, to insure against shyness, during training season?
(2) Can a landowner chase one from his land if property is posted, but not with current year's signs? If so, under what penalty?

M.W.T.—Reading, Pa.

A. (1) No. The Game Law provides that while training dogs no firearms of the type usually raised at arm's length and fired from the shoulder may be carried.
(2) Yes. The wishes of a landowner should be respected, regardless of how long the trespass signs may have been posted. A fine of not exceeding $10.00 is provided for this offense.

* * *

LIVE DUCK DECOYS UNLAWFUL

Q. Is it legal to use decoy ducks in Pennsylvania? If so, how many are you permitted to use?

E.E.L.—Lewistown, RFD, Pa.

A. The use of live duck decoys is absolutely prohibited in Pennsylvania by both Federal and State law this year. There is no objection, however, to the use of artificial decoys; the number that may be used is unlimited.

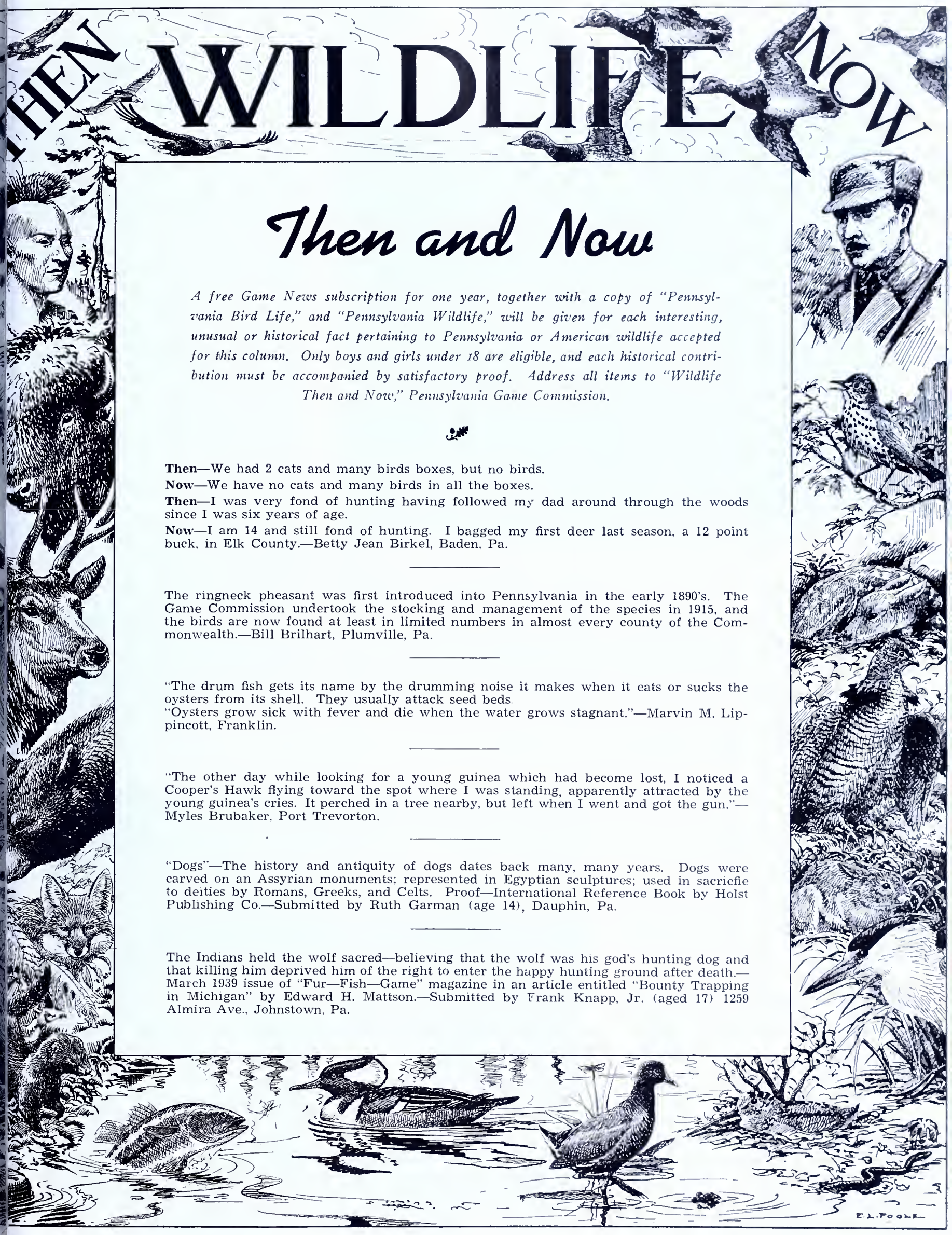
* * *

AGE LIMIT TO USE REVOLVERS

Q. How old must one be to obtain a permit to use a revolver for hunting or snake shooting? I am twenty years old.

F.E.—Fleetwood, Pa.

A. The Firearms Act of Pennsylvania forbids delivery of a pistol or revolver to any person under the age of eighteen years, and we assume that persons under that age could not legally register a revolver for hunting and fishing purposes.



Then and Now

A free Game News subscription for one year, together with a copy of "Pennsylvania Bird Life," and "Pennsylvania Wildlife," will be given for each interesting, unusual or historical fact pertaining to Pennsylvania or American wildlife accepted for this column. Only boys and girls under 18 are eligible, and each historical contribution must be accompanied by satisfactory proof. Address all items to "Wildlife Then and Now," Pennsylvania Game Commission.

Then—We had 2 cats and many birds boxes, but no birds.
Now—We have no cats and many birds in all the boxes.
Then—I was very fond of hunting having followed my dad around through the woods since I was six years of age.
Now—I am 14 and still fond of hunting. I bagged my first deer last season, a 12 point buck, in Elk County.—Betty Jean Birkel, Baden, Pa.

The ringneck pheasant was first introduced into Pennsylvania in the early 1890's. The Game Commission undertook the stocking and management of the species in 1915, and the birds are now found at least in limited numbers in almost every county of the Commonwealth.—Bill Brilhart, Plumville, Pa.

"The drum fish gets its name by the drumming noise it makes when it eats or sucks the oysters from its shell. They usually attack seed beds.
"Oysters grow sick with fever and die when the water grows stagnant."—Marvin M. Lippincott, Franklin.

"The other day while looking for a young guinea which had become lost, I noticed a Cooper's Hawk flying toward the spot where I was standing, apparently attracted by the young guinea's cries. It perched in a tree nearby, but left when I went and got the gun."—Myles Brubaker, Port Trevorton.

"Dogs"—The history and antiquity of dogs dates back many, many years. Dogs were carved on an Assyrian monuments; represented in Egyptian sculptures; used in sacricfie to deities by Romans, Greeks, and Celts. Proof—International Reference Book by Holst Publishing Co.—Submitted by Ruth Garman (age 14), Dauphin, Pa.

The Indians held the wolf sacred—believing that the wolf was his god's hunting dog and that killing him deprived him of the right to enter the happy hunting ground after death.—March 1939 issue of "Fur—Fish—Game" magazine in an article entitled "Bounty Trapping in Michigan" by Edward H. Mattson.—Submitted by Frank Knapp, Jr. (aged 17) 1259 Almira Ave., Johnstown, Pa.

THE WILD TURKEY

Continued from Page 5

Wild turkeys often travel long distances in search of food.

tame turkey descended from the wild, a natural assumption. But the wild and the domestic are of distinct races. As a matter of fact, the domestic turkey originated from the Mexican wild turkey and came to us in a very round about way. First domesticated by the Aztecs, the Mexican wild turkey was introduced into Spain by the Castillian conquerors. From Spain they were taken to England about 1525; later they were introduced into other parts of Europe, and into Asia and Africa. Finally, from Europe, English colonists brought them back across the Atlantic. We are told that turkey was first eaten in France by Charles the Ninth at his wedding banquet in 1570. Whether or not that is correct is of little consequence. We do know that on the greatest of feast days the White House dinner is not complete without a turkey to grace the table. Since the President of the United States is more powerful than any other ruler, the turkey can well lay claim to the title "King, or Dictator, of Table Birds."

Although the domestic instead of the wild turkey now usually adorns the table at Thanksgiving, there will be a great many families in Pennsylvania this year who will enjoy the delicate flavor of the wild turkey, as did our ancestors. The season for killing this feathered monarch of the woods ordinarily is provided during all or a part of the month of November. It is interesting to observe that a considerable increase in the numbers killed have been reported during the past few seasons. Each year between six and seven thousand of these handsome birds are taken in Pennsylvania. Undoubtedly, the kill this year will equal or excel others. Many of the lucky gunners each year make arrangements to keep their prizes until Thanksgiving to enjoy the delicious flavor of the birds on "Turkey Day."

The wild turkey suffered greatly as a result of trapping, market hunting and lack of protection. It has disappeared over much of its natural range. In New England where the forests were literally alive with the birds, they have entirely disappeared.

Due to the constructive game policy inaugurated years ago, Pennsylvania is one of the few states in which gunners still enjoy the sport of wild turkey hunting, in spite of the fact that about 650,000 licensed hunters roam the fields and forests each year. We can well be proud of this achievement, for in regions where wild turkeys are found they are the most coveted of all game. Hunters killing or even seeing their first one, experience indeed "the thrill that comes once in a lifetime." Many hunters during each open season walk proudly down the trails, in the purple dusk of autumn, bearing across their shoulders specimens of this noble bird, just as their ancestors did three centuries ago.

In the April issue of the **Game News** the writer outlined for sportsmen in some detail the activities of the Commission in connection with the maintenance of a future wild turkey supply in Pennsylvania. The article likewise pointed out some of the results obtained in this connection. Unless something unforseen happens, the Commission's program now promises to make certain a continued, and perhaps increased, abundance of this magnificent bird. With the continued cooperation of sportsmen in the program, hunters in Pennsylvania no doubt for years to come will be thrilled by the sight of the splendid wild turkey. They will be privileged to continue to match their wits with the noblest of game birds in an attempt to secure a prize for the Thanksgiving feast, as did their Pilgrim forefathers.

Always alert for danger, the turkey is one of the wildest of all wild things of the woods.

Pennsylvania's Rabbit Transfer Program

Continued from Page 7

1,366; Lehigh 1,140; Westmoreland 1,056; and Lawrence, 1,029.

Six rabbits trapped in Frick Park, Pittsburgh, this past winter weighed seventeen pounds, ten ounces, or an average weight of two pounds, fifteen ounces.

A Trapping Agent in Blair County reported that on the night of February 13, he found a seven pound house cat and a dead rabbit in one of his box traps. The 13th proved to be unlucky for both the rabbit and the cat.

A deputy Game Protector in Berks County, experimented one week-end with a new kind of rabbit bait. He secured some sweet cider, put it into small shallow pans and froze it. He then cut it into small cakes and used it in his rabbit traps as bait. He was successful in catching eighteen rabbits the first week-end with the frozen cakes of sweet cider.

There have been hundreds of cases of rabbit damage reported to the Harrisburg Office of the Commission and to the Game Protectors during the past spring and summer. Like the old story about the man whose roof leaked, "When it was clear the leak didn't cause any concern, and when it rained it was too wet to repair it", these persons waited until the actual damage has occurred to think about relief. The game transfer program in Pennsylvania has now been so widely publicized that people having gardens, nurseries, orchards and shrubbery, that have suffered because of rabbit damage, should ask their local Game Protector during the winter trapping season to remove such game from their premises.

In cold weather such game is easily trapped, while the problem is expensive and the results are poor when there is so much food available for the rabbits. The Game Commission cannot well continue this transfer work in the spring and summer to relieve these local damage complaints, and sportsmen and property owners are requested to cooperate with the Commission in having local Protectors notified next winter if such trapping is desired.

The Game Transfer Program is fairly well organized in most of the counties of Pennsylvania. The groundwork has been laid to expand and increase this program to even much greater proportions. The Commission is counting on its entire field organization, sportsmen's organizations, landowners, 4-H Club, and Boy Scouts, to make the coming winter a banner season in providing native rabbits and other game for restocking purposes on territory that we are all constantly trying to improve as our "Happy Hunting Grounds".

Variation in the terrain of the Maiden Creek Dam Area.

Location	Name of Area	Acreage	Total Rabbits	Acres Per Rabbit
Maiden Creek, Berks County	Auxiliary Refuge No. 99, Reading City Watershed	1,000*	1,518	.65
Harrisburg	Wildwood Park, State Game Propagation Area A-5	700	298	2.35
Nazareth, Northampton County	Nazareth Cement Company property, State Game Propagation Area A-8	165	250	.66
Hanover, York County	Hanover Municipal Water Works, State Game Propagation Area A-3	700	304	2.3
Red Lion, York County	Red Lion Water Company, State Game Propagation Area A-14	100	73	1.36
Carbon County	Bowmanstown Borough, State Game Propagation Area B-12	60	79	.76
Luzerne County	State Game Propagation Area B-10	150	68	2.2
Schuylkill County	State Game Propagation Area B-19	110	60	1.83
Susquehanna County	State Game Propagation Area B-29	360	144	2.5
Columbia County	State Game Propagation Area C-8	79	78	1.01
Columbia County	State Game Propagation Area C-10	100	107	.93
Columbia County	State Game Propagation Area C-11	105	75	1.4
Lycoming County	Pine Creek Lime & Stone Co. property, State Game Propagation Area C-1	50	140	.35
Northumberland County	Dalmatia Water Company property, State Game Propagation Area C-12	110	61	1.8

*This area really contains 2,000 acres of land, but in no one year has more than half of it been trapped.

Snyder County	State Game Propagation Area C-2	50	30	1.66
Snyder County	State Game Propagation Area C-3	70	37	1.9
Snyder County	State Game Propagation Area C-4	106	45	2.35
Snyder County	State Game Propagation Area C-7	100	40	2.5
Franklin County	State Game Propagation Area D-2	111	81	1.37
Centre County	Western Penitentiary Reservation, State Game Propagation Area E-1	1,000**	579	1.72

**This area contains a total of 6,818 acres, but a great deal of it is woodland, and only about 1,000 acres is trapped.

Venango County	City of Franklin, State Game Propagation Area F-1	137	106	1.29
Allegheny County	State Game Propagation Area G-1	506	250	2.02
Cambria County	State Game Propagation Area G-2	166	81	2.05

← Some of the younger growth on the Maiden Creek Dam Area.

Self Selection of Fall and Winter Foods

Continued from Page 15

Grain	Percent
Corn	36.79
Wheat	34.71
Oats	5.16
Barley	4.95
Buckwheat	6.65
Soybeans	11.74
Total	100.00

2. Slightly superior results, as measured by growth, feed consumption, and feed consumption efficiency, were obtained with birds fed the recommended Penn State Pheasant Grain Mixture, which is as follows:

Coarse-cracked yellow corn	100 pounds
Wheat	100 pounds
Oats	50 pounds
Buckwheat	50 pounds
Barley	50 pounds
Total	350 pounds

3. Birds in all groups, carefully and properly examined, were comparable in feathering, weight, and general condition to each other and to wild pheasants.

4. There was no measurable advantage in allowing pheasants free choice of six grains, as compared with the use of the Penn State Pheasant Grain Mixture.

Literature Cited

Skoglund, W. C.

1939 Winter feeding of ring-necked pheasants. Game Breeder and Sportsman 43 (9): 130-31.

1940 An improved ration for starting ring-necked pheasants. Pennsylvania Agricultural Experiment Station Bulletin 389.

TABLE 5.—Amounts and percentages of the various grains consumed by the free choice diet groups per 100 birds.

4-week periods	Corn (a)	Corn (b)	Wheat (a)	Wheat (b)	Oats (a)	Oats (b)	Barley (a)	Barley (b)	Buckwheat (a)	Buckwheat (b)	Soybeans (a)	Soybeans (b)	Total (a)
Holding Field Group													
1	38.32	38.37	23.71	23.74	8.17	8.18	7.82	7.83	17.71	17.73	4.15	4.15	99.88
2	84.77	36.81	62.09	26.97	18.85	8.19	22.20	9.64	28.57	12.41	13.78	5.98	230.26
3	141.22	43.34	116.37	35.71	14.22	4.36	8.37	2.57	23.17	7.11	22.52	6.91	325.87
4	148.71	38.82	138.78	36.22	20.08	5.24	22.84	5.96	14.61	3.81	38.10	9.94	383.12
5	187.11	44.05	175.54	41.33	9.47	2.23	9.22	2.17	22.89	5.39	20.52	4.83	424.75
6	142.20	33.88	141.44	33.70	21.90	5.22	23.36	5.57	22.06	5.26	68.73	16.38	419.69
7	164.72	33.57	180.83	36.85	34.00	6.93	15.50	3.16	25.06	5.11	70.56	14.38	490.67
8	116.85	28.58	127.16	31.10	16.85	4.12	28.59	6.99	30.98	7.58	88.38	21.62	408.81
Total or Average	1023.90	36.79	965.92	34.71	143.54	5.16	137.90	4.95	185.05	6.65	326.74	11.74	2783.05
Colony House Group													
1	24.14	15.33	66.69	42.34	6.30	4.00	5.00	3.17	52.88	33.57	2.50	1.59	157.51
2	68.51	27.47	100.54	40.32	13.73	5.51	5.48	2.20	52.82	21.18	8.29	3.32	249.37
3	106.76	33.00	114.70	35.46	7.35	2.27	8.23	2.54	57.06	17.64	29.40	9.09	323.50
4	94.71	31.11	141.17	46.38	1.47	0.48	2.06	0.68	39.99	13.14	24.99	8.21	304.39
5	134.87	46.11	113.16	38.69	1.49	0.51	1.49	0.51	27.84	9.52	13.65	4.77	292.50
6	147.51	57.28	60.93	23.66	4.06	1.58	4.06	1.58	6.88	2.67	34.07	13.23	257.51
7	140.00	45.90	50.00	16.39	5.00	1.64	5.00	1.64	5.00	1.64	100.00	32.79	305.00
8	152.69	54.46	20.77	7.41	.....	.....	.....	.....	20.00	7.13	86.92	31.00	280.38
Total or Average	869.19	40.05	667.96	30.78	39.40	1.82	31.32	1.44	262.47	12.09	299.82	13.82	2170.16

(a) Pounds (b) Percent

Moves Ground, Nest and Sitting Wild Bird, Twenty-five Miles to Photographers Studio

Out of the woods of Maine comes a tale that would be branded as equal to Baron Munchhausen's best were it not for the fact that photographs and reliable witnesses can attest to its authenticity, according to the Fish and Wildlife Service, United States Department of the Interior. It's the story of a man who moved 25 square-feet of ground 25 miles to a photographer's studio to get good pictures of a woodcock sitting on a nest.

Here are the facts:

John Stobie, of Waterville, Maine, an employee of the State Inland Fish and Game Commission, was working near the Lily Bay Hatchery in Piscataquis County, in the north-central part of the State, when he spied the woodcock sitting on its nest. As he approached and examined the bird, Stobie was surprised to see that it did not flush. He realized then that the eggs were probably on the verge of hatching.

"This is an opportunity to get a really good picture," thought Stobie.

The nearest photographer was 25 miles away in Greenville. Stobie called him. The photographer explained that to get the clear pictures Stobie wanted would require too much equipment and would be too expensive.

Undaunted, Stobie grabbed a pick and a shovel and went to work. He dug a 5-foot square around the sitting woodcock. The female didn't bat an eye.

With the help of some interested spectators, Stobie lifted the 5-foot piece of ground into a large box and put the box on a truck. Then he hauled the precious load to Greenville and into the photographer's studio.

It was a photographer's field day, according to reports. The woodcock was treated like some Hollywood Star taking camera tests for a new part. She submitted to close-ups, medium shots, side shots, a picture of the nest, and another of the eggs, and during this time stayed as close to her clutch as she could.

When the pictures were taken, Stobie repacked the ground, the nest, the eggs, and the woodcock into the box, hauled it back to the field near the hatchery, and replaced the sod exactly as he found it.

According to reports, the woodcock resumed a normal schedule and later hatched her young.

OCTOBER REVERIES

The October sun shines warm and bright,
The wild geese honk on their southern flight,
The wind is stirring the tinted leaves
And the air is fresh from its gentle breeze.

Oh the "red gods" beckon and call to me
But I cannot answer them, don't you see,
I'd love to be out in the woods today
For a little sport and a bit of play.

I'd like to be out with a dog and gun,
With a pal along to enjoy the fun.
I'd love to stand on some moss covered log
And watch the actions of my dog
As he flushed a grouse, or a squirrel in a tree,
Oh that would be life indeed for me.

Mother Nature gives with a lavish hand
On a day like this to all the land.
Yes I'd like to be out with a dog and gun,
And a friendly pal to share the fun.
I'd like to be out but I can't you see,
For the old wheelchair has a claim on me.

—H. H. Hamill, Plumville, Pa.

A new leaflet recently published by the Fish and Wildlife Service, Washington, D. C., entitled, "Birds as a Factor in Controlling Insect Depredations", and known as BS-162, is available to the public upon request.

RUFFED GROUSE POINTERS

Continued from Page 13

"It is hard to understand why the majority of individuals who enjoy the out-of-doors are so badly dressed."

I quote W. H. Hudson because he concisely sums up my thoughts with these words: "All weathers are good to those who love the open air." A friend of mine would pick the only rainy weekend in October to come to Vermont for a couple of days' sport. We looked out of the dining room window; a light mist was falling and the sky was leaden. It did not look promising, but I knew he was game for anything so away we went without any discussion. An older Camp Fire member was visiting near by, and I didn't think it would take much persuasion to get him out. At ten o'clock the mist had turned to rain and by noon it was pelting, but we already had five birds. A sandwich, apple, and cup of soup from the good old thermos bottle improved the looks of the day considerably. We passed through the village of Jericho where a large sign on a farmhouse caught my eye. It read "Jericho Sanitarium," whereupon I remarked that I had not noticed the place before and wondered what sort of inmates it had. Our genial club member in the back seat gave me the answer without a moment's hesitation: "That's where people end up who hunt partridges on days like this." His remark not only warmed us up but drove me on to new covers. Various pockets that were emptied that evening accounted for ten birds, the high day of the season; and, incidentally, the birds were out feeding. I would take another complete soaking anytime for many less birds.

I recall another day that one would ordinarily think was ideal for the sport. A frosty night gave way to a cloudless morning with no wind, and the glass rose to sixty degrees at noon. We hunted covers known to hold birds and subsequently took birds from them, but on that particular day we had very little success even starting birds.

A strong wind is your worst enemy because you cannot hear the birds nor your partner at times and the rustling of leaves and underbrush seem to make the birds wilder than usual. It is well to remember that game birds will jump into the wind if possible, and, with the exception of waterfowl, they will bank across wind or fly with it. You will have more shots if you can hunt your covers up wind. The afternoon seems to produce more birds than the morning. The last hour of the day should receive your particular attention because the chances of jumping birds are particularly favorable. Nevertheless, long shadows are falling and the light is not good; consequently your reactions are slower and you will find that you miss more readily.

I should like to paraphrase the latin "de gustibus non disputandum est" into "de vestibus et armis non disputandum est;" my translation being, "there shall be no argument about clothes and guns." It is hard to understand why the majority of individuals, who enjoy the out of doors, are so badly dressed; and seem to enjoy looking as though they had just been emptied out of one of the city's new garbage removal trucks. Perhaps it is because they believe that by so doing they are stripping themselves of all convention and are closer to nature. Very often the outfits are unserviceable. You will never have to wear my pants if you don't want to, and you can't borrow my gun, so here are my thoughts on the subject. Use your judgment and dress according to the weather so far as the undergarments and shirt are concerned. The good old duxbak material for unlined cap, coat and pants will stand you in good stead. Duxbak has recently put out a light weight material which is ideal with leather knee facing. Continual experimentation with footwear favors the ten inch Russell "bird shooter" moccasin with crepe rubber sole to be worn over one pair of good woolen stockings. It is always advisable to take a light sweater along if you have to ride home at the end of the day.

If you own more than one gun, take along the one you feel you can do the best job with regardless of its bore, weight or length of barrels. There is too much emphasis placed on twenty-six inch barrels and open bores for brush shooting. They are not necessary. You will have plenty of excuses anyway, and my advice is that you do all your shooting with one gun, preferably a twelve-gauge, because it is the standard bore; shells are procurable most anywhere, and year in and year out less crippled game will be the result. Number nine soft in the right barrel and number seven and one-half or eight in the left, with three drams of powder and an ounce and an eighth of shot, is my favorite load. If you are caught short sometime without small shot, don't worry about it. Many a grouse has been taken with number twos. I prefer small shot even in heavy cover because practically all your shots are within thirty yards and the increased pattern more than compensates for the loss by foliage obstruction. When number seven and one halves or nines are thrown by the same powder charge, leaves will cut down the efficiency of a seven and one-half pellet almost as much as that of a nine. If you wanted to make sure of hitting a mark at close range, you would naturally prefer to throw a handful of sand at it rather than a handful of marbles.

"I would suggest a semi-inflated football."

In Audubon's writings on the ruffed grouse, he speaks of the practice of decoying partridges. The hunter provided himself with an inflated bullock's bladder and short stick. He then selected a spot in the woods that afforded a good vantage point from which to shoot, and proceeded to beat the bladder rhythmically emulating the drumming of a partridge. I have never tried this method but would suggest a semi-inflated football to save you the trouble of securing a bullock's bladder if you intend to try this. Some hunters have had fair success waiting near a grapevine or thorn apple tree and have shot birds as they have flown in to feed. In spite of the fact that you will get a kick out of having made a good shot and outguessed the bird, you may have a long and fruitless wait. A day in the fall of the year on shanks' mare through your favorite grouse covers is the quintessence of bird shooting.

NO ONE IS ABOVE THE LAW

By imposing a fine of $25 upon himself after the accidental discharge of a rifle in his automobile wounded a neighbor's son, Judge Edward P. Little of Montrose gave impressive testimony that no one is above the law.

Judge Little was guilty of violating the State Game Code which prohibits loaded guns in automobiles in the interest of safety. Because of his exalted position, he easily might have escaped punishment, but he did not choose this course of least resistance. He preferred to have justice served.

Thus, he set an excellent example in addition to calling attention to the danger of the practice in which he intentionally or unwittingly indulged.

He will remind many Wilkes-Barreans of the late Judge J. B. Woodward who personally appeared in police court while a member of the Common Pleas bench to answer a charge of violating a parking rule. He might have called the department on the telephone, employed counsel or sent a secretary with the fine, but, instead, he waited his turn before the bar of justice like the humblest citizen.

Judge Woodward proved his stature by his reaction toward the summons. He was one of the most illustrious jurists ever to sit in Luzerne County and he was just as fine a gentleman. Judge Little impresses us as a big man, too, despite his name.

"DUCK" COUNTS VALUABLE

Discovery by Biological Survey workers of a method for making reasonably accurate estimates of duck concentrations has been of inestimable value in calculating the supply of these birds available for shooting and breeding. Annual inventories made by Survey investigations and cooperating agencies and individuals throughout the country give authoritative information on the trends in population. In 1940, it is estimated that there are some 65 million migratory birds in North America.

THE VALUE OF PREDATORY ANIMALS

Continued from Page 8

A mouse-hunting red fox. Foxes kill large numbers of mice, rabbits, and other pests, but are themselves widely hunted for sport.

The reader might well inquire at this point what animals should be classed as vermin. The answer—perhaps none. There are, however, a host of animals, usually of small size and widespread abundance, which seriously compete with game species, both directly by vying for the same food and killing the game, and indirectly by harboring disease organisms which find susceptible hosts in desirable birds and mammals. Among these lesser but nevertheless important species we might mention various small rodents, such as the brown and cotton rat, ground squirrels, certain mice and even insects. It has been demonstrated that fire ants cause a considerable loss to the quail population when they invade the newly pipped eggs of the bob-white and kill the hatching chicks. The quail studies of H. L. Stoddard in Georgia indicate the cotton rat is a serious competitor of the quail. Stoddard found the cotton rat population to number 40 per acre in broom sedge habitat at a certain season, whereas the quail population did not exceed one bird per acre. The cotton rat competes directly with the quail for food, and furthermore, the rats destroyed 3.5 per cent of the quail nests. The natural enemies of the cotton rat are weasels, foxes, certain birds of prey and other "vermin." How much worse the quail destruction from cotton rat depredation might be in the absence of predators!

We can credit racial sanitation to the predators by their culling of the weak and unfit. By this weeding out of the undesirables, predators are responsible for a strong and alert race of game species. Far from being a misfit the predator is an essential cog in the machinery which turns out healthy game. Almost never is it taken into consideration that game birds killed by the predator are better off dead. Individuals caught by predatory animals are frequently ailing, and their destruction minimizes the chance of infection being spread to their fellows. Predators have been called the sanitary brigade, an essential army which is ever at work eliminating the sick and unfit. They act as a check on overcrowding, thus preventing the pandemics which always accompany a marked increase in animal populations.

There are as yet many predator influences beyond our vision. In his "Game Management" Leopold cites an illuminating instance in which predators apparently had a desirable effect on a game animal. The normally distributed deer herd on Vancouver Island, after the mountain lions and wolves had been killed off for their benefit, suddenly "huddled up" on a small part of their original range and overbrowsed it. Apparently normal depredation had some as yet obscure influence in keeping the deer distributed generally over the range. This is not cited as gospel, but rather as a suggestive influence which predators may have on their legitimate prey.

We yet know little regarding the relations existing between the mouse millions and game birds. What has been recorded indicates that the food of the little deer mouse is similar to that of the grouse. One mouse will store a peck of beechnuts or several quarts of clover seeds. Various small mammals, which frequently number more than one hundred to the acre, are potentially very important competitors of game birds for the available food supply. Fortunately their numbers seldom get out of bounds, for alert foxes, weasels and other predators are always ready to grab them up.

Other Predator Values

While most hunters are bird-minded, there exist a fair number who follow the hounds in quest of certain predators. Wherever the fox ranges, there we find hunters who spend long days afield, listening to the brassy notes of hounds ringing like bells on the frosty air. Even if the elusive one is not bagged, the hunter feels well repaid by a sight of Reynard. As autumn approaches, the great southern clubs organize their annual fox hunts. Masters of the hunt must look to northern trappers for their quarry. New York foxes, trapped or dug from their dens as cubs, are shipped to Maryland, Virginia and the Carolinas for these hunts. Still-hunting the fox finds much favor in New England. Not only foxes, but wildcats, wolves, coyotes, mountain lions and several other predators are eagerly pursued by a large fraternity of hunters who find in them an unrivalled sport.

The magnitude of the fur industry and its reliance upon wild caught fur-bearers can scarcely be realized by the uninitiated. Young men and old everywhere supplement their income by harvesting the fur crop. In 1928 it was said that the fur catch in the United States was worth $60,000,000 to the trapper. Among the more important species contributing to this rich harvest are certain predatory mammals, as the skunk, fox, opossum, mink, weasel, coyote and several others. Even in thickly settled districts these animals abound. Coyotes still invade the city limits of Denver, and fox tracks may yet be seen in the new fallen snow a few miles from New York. The members of many State conservation departments are alive to the value of these furred predators, and provide suitable protection for the various species while their fur is unprime. Other States, perhaps influenced by political pressure rather than by biological considerations, give little heed to the alarming status of these important species, and practice little or no protection for some of them. Indeed, not a few misguided officials have placed a price on the heads of such "vermin," and as a consequence, have squandered funds which might better have gone toward restoration and improvement of game cover.

Destructive rodents and insect pests share largely in the food of many predators. Ground squirrels, field mice and rats take a colossal toll of our crops, stored food and poultry. Rodents are responsible for the spread of typhus fever, plague and other pestilential diseases. The loss occasioned by these pests in the United States has been placed at half a billion dollars annually. Add to this the cost and effort of fighting these hordes ($812,478 was spent in California in 1930 for rodent control alone) and we soon appreciate the necessity of reducing these rodent pests. Alert predators

The weasel is an inverterate destroyer of rodent pests, such as the ground squirrel that spreads the dreaded plague, destroys crops and attacks young game birds.

do much to keep these rodents in check. Instances of mouse plagues have been traced to the eradication of their natural enemies, thus permitting a rapid increase in the rodent population. A. B. Howell[4] states that a number of years ago the foxes were purposely exterminated in Bohemia. Following this action there occurred such a severe epidemic among the hares of this area that it was necessary to reintroduce the foxes.

We might finally point out, among the many assets of predatory animals, their great recreational value. The so-called sentimentalists enjoy as much pleasure from viewing a bear as the hunter who bags it. The first glimpse of a wild fox among its natural surroundings is a red letter day in the life of a nature lover. Tourists to the west thrill to the sight of a coyote, or rejoice in its melancholy howl on the night air. Cynics may scoff at the esthetic value of our wild animals, but such nevertheless definitely exists. This recreational value of our predators is reflected in the laws for their protection in the great national parks of the west. Here they may neither be hunted nor otherwise molested, and in consequence they become very tame, delighting visitors by their frequent appearance.

Bounties and Vermin Campaigns

Bounties are one of the oldest methods employed to curb the increase of supposedly undesirable species. The system is now employed in a number of States to limit the increase of certain predators. It has never been demonstrated that bounties have effectively reduced the species for which they were intended. On the contrary, a study of the system abundantly demonstrates its uselessness. Where bounty systems have been in favor for a number of years, the figures all too often indicate that the species on which a price is paid has increased. This may be due to an actual increase in the species, but more often it is the result of fraud. Animals caught in an adjoining State may be probated for bounty in the State which pays a bounty on them. Recently some Montana Indians treated the skins of full grown gophers with oil and lampblack and passed them off as coyote pups in an attempt to collect the two dollar bounty.

Vermin campaigns to rid the fields of "undesirables" are largely the efforts of uninformed fish and game clubs. Fortunately few foxes, weasels, skunks and other predatory beasts are killed, but the attendant publicity through press reports does much to put these animals in an unfavorable light with the laity. Such persecution of predatory species is all but baseless and is thoroughly unjustified in the light of cold scientific facts.

Control of certain predators may be justified about game farms; the poulterer may conscientiously kill the occasional marauder which harasses his flocks. But widespread condemnation of these valuable mammals, based on mere allegations and false premises, is to be deplored. We can no longer overlook their true significance, and the important role they play in nature.—From Bulletin New York Zoological Society, March-April, 1937.

[4] Condor, May, 1930.

FOX HUNTING NOTES

« « By W. NEWBOLD ELY, M. F. H.

THE spread of the war scenes to Africa recalls a letter from Mr. Wood whom I met while a guest of Sir Alfred Booth of Surrey which I mentioned in "Country Life" or the "Sportsman" a few years ago. Mr. Wood was a veteran of Rhodesia where the lions are as common to their gardens as are rabbits to yours, and where the Delta and Mazoe Hounds have such mixed bags as these:

"The meet was at the farm 'Cave' at 5 A. M. and owing to the heat it was decided to draw the banks of a small stream in the hope of finding a boar in the rushes. No pig was at home, but an otter lying rough was put down, and an exciting short hunt took place before he was killed in the middle of a pool, but not before several of the hounds bore marks of the encounter. It was a fine dog otter, the skin measuring four feet, four inches. He was skinned, as hounds, not being used to this sort of game, would not break him up . . . At the White Gambola River, soon after starting to draw, hounds were away on a jackal. Running into thick timber, they changed to a pig, and had an exciting hunt for about seventy-five minutes before baying up and killing—a six-mile point.

"The 22nd was a good day from a meet at the farm 'Naples.' Hounds found at 5:40 A. M., and after running with grand music for about five miles the pack divided at a large kopje, the Master sticking to twelve couple, and one of the whippers-in carrying on with the other six couple. Both lots succeeded in killing; the twelve couple ran into a very tough boar, who put up a tremendous fight, and before being killed managed to put in some nasty gashes in three couple of hounds. This was a hunt of eighty minutes, with a seven-mile point, on a roaring scent. The six couple killed a pig after a hunt of seventy minutes. This pig luckily put up a poor show. Every one of the new entry, five and a half couple, were up at the kill, and with one exception tackled well, and a couple will carry honorable scars for life.

"Meet at the Kennels at 5 A. M. Soon after moving off the hounds were away on a jack which, after thirty minutes at racing pace, managed to slip into some rocks just in front of the leading hounds. Later in the morning a tiger cat was put up which after a short burst was treed and killed."

And now let us close with a quotation from a poem by Will Ogilvie in "Horse and Hound." It appeared before any rumbles even of World War II and yet it is timely and I guess we all hope that it will be prophetic.

Not in our day shall hunting die,
Or the day of our grandsons' sons, say I.
If we rode the earth in a hundred years
And looked at our land through a horse's ears
We should see the fields as we see them now
And foxhounds feathering over the plough.

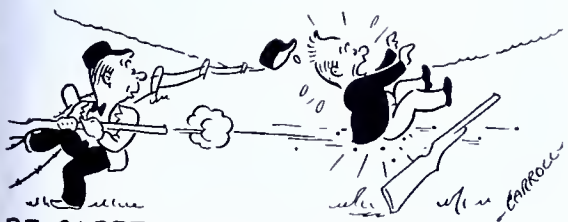
For lads of our line shall carry ahead
The torch that was lit by men long dead;
And never a fence that our grandsires flew
But our breed shall tackle it—over or through—
Clean-set timber or cut-and-laid,
We may trust them all to the new brigade.

"For the first time since the parking area has been in use cars were parked in the temporary area on July 4. During the early afternoon the parking area was filled. An estimated crowd of 5000 or over visited the museum between the hours of 8 A. M. and 8 P. M."—Game Protector Burt L. Oudette, Crawford County.

"On Monday, July 8, while hauling logs to the sawmill, I observed five broods of young grouse, two single grouse, seven woodchucks, four rabbits, two grey squirrels and one deer on Game Lands No. 111. Drove once about two one half miles of road on Game Lands while hauling these logs."—Game Protector Nicholas M. Ruha, Somerset County.

LYNX

The name lynx is derived from the Greek word meaning "to see," and is a tribute to that animal's exceptional powers of vision. We also pay tribute to the extraordinary eyesight of the animal when we describe a person as "lynx-eyed."—From the National Wildlife Federation.



COPY OF STATEMENT AS FILED WITH ALLENTOWN POST OFFICE SEPTEMBER 13, 1940

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 4, 1912, of Pennsylvania Game News, published at Allentown, Pennsylvania for October, 1940.

Before me, a notary public in and for the State and county aforesaid, personally appeared Leo A. Luttringer, Jr., who, having been duly sworn according to law, deposes and says that he is the editor of the Pennsylvania Game News, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Commonwealth of Pennsylvania, Pennsylvania Game Commission, Harrisburg, Penna.; Editor, Leo A. Luttringer, Jr., Harrisburg, Penna.; Managing Editor, William L. R. Drake, Harrisburg, Penna.; Business Manager, D. L. Batcheler, Harrisburg, Penna.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Commonwealth of Pennsylvania, Pennsylvania Game Commission, Harrisburg, Pennsylvania.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affidavit's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affidavit has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

Signed: Leo A. Luttringer, Jr.

Sworn to and subscribed before me this 12th day of September, 1940.

Signed: Lucille A. Stroup,
Notary Public.

[Seal] Commission expires March 5, 1943.

ASTRONOMICAL CALENDAR OCTOBER, 1940

Date	Day of Week	Sun Rises	Sun Sets
October	1, Tuesday	6.03	5.50
"	2, Wednesday	6.04	5.48
"	3, Thursday	6.05	5.47
"	4, Friday	6.06	5.45
"	5, Saturday	6.07	5.43
"	6, Sunday		
"	7, Monday	6.09	5.41
"	8, Tuesday	6.10	5.39
"	9, Wednesday	6.11	5.37
"	10, Thursday	6.12	5.36
"	11, Friday	6.13	5.34
"	12, Saturday	6.15	5.32
"	13, Sunday		
"	14, Monday	6.17	5.29
"	15, Tuesday	6.18	5.28
"	16, Wednesday	6.19	5.26
"	17, Thursday	6.20	5.25
"	18, Friday	6.21	5.23
"	19, Saturday	6.22	5.22
"	20, Sunday		
"	21, Monday	6.24	5.19
"	22, Tuesday	6.25	5.18
"	23, Wednesday	6.26	5.17
"	24, Thursday	6.27	5.15
"	25, Friday	6.29	5.14
"	26, Saturday	6.30	5.13
"	27, Sunday		
"	28, Monday	6.32	5.10
"	29, Tuesday	6.33	5.09
"	30, Wednesday	6.34	5.07
"	31, Thursday	6.35	5.06

OFFICIAL 1940 OPEN SEASONS AND BAG LIMITS

(AS FIXED BY GAME COMMISSION AT MEETING OF JULY 11, 1940).

Open season includes both dates given, Sundays excepted for game. **On November 1 no hunting of any kind before 9 A. M.** With this exception, shooting hours daily are 7 A. M. to 5 P. M., except from July 1 to September 30 inclusive 6 A. M. to 7:30 P. M., E. S. T. Traps may not be set before 7 A. M. on the first day of the seasons for trapping in open counties. Raccoons may be hunted at night with a noon-to-noon daily limit.

UPLAND GAME (Small game possession limit three days' bag)	BAG LIMITS Day	BAG LIMITS Season	SEASONS Open	SEASONS Close
Woodchucks (Groundhogs)	4	Unlimited	July 1	Sept. 30
Ruffed Grouse	2	10	Nov. 1	Nov. 30
Quail, Bobwhite	5	15		
Hungarian Partridges (3 counties only)*	2	6		
Wild Turkey (See 8 counties closed below)*	1	1		
Ringneck Pheasants, males only	2	12		
Grackles (commonly called Blackbirds)	Unlimited			
Rabbits, Cottontail	4	20		
Squirrels, Gray, Black and Fox Combined kinds	6	20		
Squirrels, Red	Unlimited		Nov. 1	Sept. 30, 1941
Raccoons, all counties by individual or hunting party	1	15	Nov. 1	Dec. 31
Raccoons, by traps (21 counties closed below)*		15	Nov. 1	Dec. 31
Bear, over one year old by individual (See 10 counties closed below)*	1	1	Nov. 18	Nov. 21
Bear, over one year old by hunting party of five or more*	2	2		
Deer, both sexes, **except those with only a visible spike antler or antlers without points**	1	1	Dec. 2	Dec. 14
Deer, as above, by hunting party of 6 or more	6	6		

NO OPEN SEASON—Chukar Partridges, Sharp-tailed Grouse, Doves, Varying Hares (Snowshoe Rabbits), Deer with only a visible spike antler or antlers without points, Elk and Cub Bears.

FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates).

Minks	Unlimited	Nov. 1	Jan. 31, 1941
Otters (By traps only, in 6 counties)*	4	Nov. 1	Jan. 31, 1941
Muskrats (By traps only)	Unlimited	Dec. 1	Dec. 31
Beavers (Traps only; 27 counties closed)*	3	Mar. 1	Mar. 15, 1941
Opossums and Skunks	Unprotected	until	Sept. 30, 1941

*SPECIAL COUNTY REGULATIONS

FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates).

HUNGARIAN PARTRIDGES—Hungarian Partridges may be killed only in the counties of Lycoming, Montour and Northumberland.

TURKEY—No Turkey season in Cameron, Clarion, Elk, Forest, Jefferson, McKean, Potter and Warren Counties.

RACCOON TRAPPING—No Raccoon trapping in Beaver, Berks, Bucks, Butler, Cambria, Carbon, Chester, Dauphin, Delaware, Lancaster, Lawrence, Lebanon, Lehigh, Mercer, Montgomery, Northampton, Northumberland, Philadelphia, Schuylkill, Snyder and York Counties.

BEAR—No Bear season in Adams, Bedford, Blair, Cumberland, Franklin, Fulton, Huntingdon, Juniata, Mifflin and Perry Counties.

OTTER TRAPPING—Otter trapping only in Lackawanna, Monroe, Pike, Susquehanna, Wayne and Wyoming Counties.

BEAVER TRAPPING—Beaver trapping in all counties except Armstrong, Beaver, Bradford, Cambria, Cameron, Carbon, Centre, Clearfield, Columbia, Fayette, Greene, Indiana, Jefferson, Lycoming, McKean, Montour, Northumberland, Potter, Schuylkill, Snyder, Somerset, Sullivan, Tioga, Union, Washington, Westmoreland and Wyoming. One person may set and tend 10 traps only.

SNARES—Snares without springpoles may be used for taking predators only in Cameron, Clarion, Clinton, Elk, Forest, McKean, Pike, Potter, Susquehanna, Warren, Wayne and Wyoming Counties between December 16 and March 31, 1941.

FEDERAL SEASONS MIGRATORY GAME BIRDS

	DAILY BAG LIMITS	1940 OPEN SEASON (Sundays Excepted)
Rails and Gallinules (except Sora and Coot), combined kinds	15	Sept. 1-Nov. 30
Sora	15	
Woodcock	4	Oct. 16-Oct. 30
Wild Ducks (except Wood Ducks)	10*	Oct. 16-Dec. 14
Wild Geese (combined kinds)	3	
Snipe, Wilson's (Jacksnipe)	15	
Coots (Mudhens)	25	

NO OPEN SEASON—Ross's Geese, Wood Ducks and Swans. Magazine shotguns must be plugged to 3 shots.

SHOOTING HOURS—(Standard Time) Ducks, Geese and Coots, Sunrise to 4 P. M.; Rails and Gallinules, 7 A. M. to 5 P. M., except in Tidal Marsh Areas Sunrise to Sunset; Woodcock and Snipe, 7 A. M. to 5 P. M. EXCEPTION: No hunting of any kind before 9 A. M. November 1.

*In the daily duck limit only 3 Canvasbacks, Redheads, Bufflheads or Ruddy Ducks, or these combined species, may be taken. Possession limit: Ducks, Geese and Woodcock, twice the daily bag; other species daily bag only. Possession lawful 20 days after season.

NOTE: See posters in Post Offices, or write Game Commission, Harrisburg, Pa., for complete regulations and methods of hunting migratory game birds.

OBEY THE LAW » » » HELP YOUR PROTECTOR

Stop the cheater by reporting his license number! Automobile license numbers will help too!

The vast majority of Pennsylvania's hunters are real sportsmen, and observe the law They can help themselves by reporting promptly those who violate. (Use the list below:)

DISTRICT GAME PROTECTORS

COUNTY			Phone
Adams	Leo Bushman, 264 Baltimore St., Gettysburg		
Allegheny	R. A. Liphart, 334 E. 11th Ave., Homestead		1550
Armstrong	R. H. McKissick, 129 Rebecca St., Kittanning		785
Beaver	J. B. McGregor, 1099 Turnpike St., Beaver		1503
Bedford	John S. Dittmar, Loysburg		7
Berks	Joseph Leiendecker, 18 Berks Place, Wyomissing	Reading	4-2713
Blair	C. C. Brennecke, 2520 21st Ave., Altoona		2-6974
Bradford	Rodman C. Case, 927 Main St., Towanda		337
Bucks	S. Earl Carpenter, 41 Taylor Ave., Doylestown		5168
Butler	Troy C. Burns, N. Main St. Extension, Butler		32100
Cambria	E. B. Thompson, 396 Coleman Ave., Johnstown		F35911
Cameron	Max N. Ostrum, 321 Third St., Emporium		4482
Carbon	W. C. Achey, 311 First St., Weatherly		4741
Centre	Thomas A. Mosier, 120 N. Spring St., Bellefonte		38
Chester	J. E. McCannon, 83 S. 5th Ave., Coatesville		191
Clarion	H. J. Updegraff, Shippenville		64
Clearfield	Frank E. Couse, 11 Weaver St., Clearfield		1354
Clinton	M. L. Reeder, R. No 1, Lock Haven		108
Columbia	M. L. Hagenbuch, 295 Penn St., Bloomsburg		692
Crawford	G. W. Keppler, 255 Locust St., Meadville		1146
Cumberland	J. M. Foreman, 239 W. South St., Carlisle		2341
Dauphin	M. P. Motter, 4231 Elmerton Ave., Colonial Park	Harrisburg	55528
Delaware	B. J. Davis, 436 E. Baltimore Ave., Media		295
Elk	E. L. Shields, Eshbach Road, St. Marys		5341
Erie	John G. Kennedy, 238 E. 22nd St., Erie		03-215
Fayette	T. T. Schafer, 16 Wilmington St., Uniontown		3794
Forest	Carl B. Benson, Tionesta		189
Franklin	Wm. W. Britton, 573 E. Catherine St., Chambersburg		195
Fulton	I. C. Baumgardner, S. 2nd St., McConnellsburg		22
Greene	J. F. Blair, 123 N. Richhill St., Waynesburg		267
Huntingdon	T. F. Bell, 407 16th St., Huntingdon		153
Indiana	O. M. Pinkerton, 21 S. 12th St., Indiana		1934
Jefferson	L. J. Haney, Brookville		366R
Juniata	H. W. Fisher, 611 Washington Ave., Mifflintown		176
Lackawanna	F. E. Jenkins, Layton Road, Chinchilla		367R2
Lancaster	J. M. Haverstick, 741 College Ave., Lancaster		5540
Lawrence	F. L. Coen, R. No. 5, New Castle		5211
Lebanon	Philip H. Melching, 409 Gannon St., Lebanon		681
Lehigh	Wm. A Moyer, 25 N. 18th St., Allentown		2-6739
Luzerne	Samuel K. Weigel, 75 E. Bennett St., Kingston		7-5382
Lycoming	F. F. Crosby, 1442 Memorial Ave., Williamsport		2-7313
McKean	Wm. J. Carpenter, Anderson St., Mt. Jewett		2521
Mercer	Duane E. Lettie, 113 W. Market St., Mercer		6
Mifflin	R. E. McCoy, 317 Logan St., Lewistown		2916
Monroe	A. N. Frantz, 75 Elk St., E. Stroudsburg		1272
Montgomery	Ambrose Gerhart, 141 Central Ave., Souderton		873
Montour	B. P. Yeager, 66 Queen St., Northumberland		1210
Northampton	M. D. Stewart, 1535 Northampton St., Easton		2-2023
Northumberland	B. P. Yeager, 66 Queen St., Northumberland		1210
Perry	H. H. Groninger, New Bloomfield		80
Philadelphia	E. W. Stucke, 7806 Verree Ave., Phila.	Pilgrim	4813
Pike	J. H. Lohmann, High St., Milford		240
Potter	A. G. Logue, 107 W. First St., Coudersport		278
Schuylkill	John Spencer, Orwigsburg		
Snyder	C. F. Walker, Beavertown		16R31
Somerset	J. S. Shuler, 354 W. Garrett St., Somerset		
Sullivan	R. E. Latimer, Muncy Valley		15R2
Susquehanna	W. D. Denton, New Milford		16
Tioga	L. H. Wood, 3 Eberenz St., Wellsboro		196R
Union	F. S. Fisher, 400 Green St., Mifflinburg		6257
Venango	W. T. Campbell, 523 Liberty St., Franklin		1107
Warren	George L. Norris, 1007 Conewango Ave., Warren		2939
Washington	C. C. Stainbrook, 52 Harrison St., Washington		566
Wayne	M. R. Miller, 30 Stanton St., Honesdale		676
Westmoreland	R. D. Reed, (Actg.) 1610 Ligonier St., Latrobe		1140W
Wyoming	Albert A. Wargo, 161 E. Tioga St., Tunkhannock		3671
York	A. C. Ganster, 520 Girard Ave., York		7434

Space does not permit listing the Game Protectors on special assignment, those in charge of Land Management, and the large corps of Deputy Game Protectors.

PLEASE REFER TO INSIDE OF COVER FOR ADDRESSES OF FIELD DIVISION SUPERVISORS.

USE YOUR HEAD
But Not as a Target.
FOR SAFETY
WEAR A
RED CAP

PENNSYLVANIA GAME NEWS

NOVEMBER 1940 TEN CENTS

PENNSYLVANIA GAME NEWS

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Material for each issue should be submitted not later than the FIRST OF EACH PRECEDING MONTH.

Permission to reprint will be granted provided proper credit is given.

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VOL. XI, No. 8

EDITORIAL

NOVEMBER 1940

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THE SEASON'S OUTLOOK

As this magazine goes to press, upwards of over 600,000 hunters are making ready for this first day afield and one of their primary thoughts is, I wonder if we're going to have good hunting this year. It is hard to predict even up to the last minute just what conditions are going to be like. The policy of the Commission for years has been to shoot square with the sportsmen in its analysis of the season and its prediction concerning the bag. It never pays to count your chickens before they're hatched. However, for the sake of those who are even now bubbling over with enthusiasm, who are counting the days, the hours, yes even the minutes, they can be assured of a pretty fair all 'round season generally speaking.

These encouraging reports were submitted by the Commission's Field Division Supervisors at a recent meeting in Harrisburg and are based not only on their own extensive observations but on those of all subordinate officers in their respective divisions as well as local sportsmen and farmers who are also interested in the game supply. From an analysis of these reports all of them can be considered conservative. It appears that ringneck pheasants seem to be more abundant this year in practically every part of the State where these wily game birds thrive; rabbits will apparently be more plentiful in some sections and scarcer in others, although on the whole the supply will be about the same as last season; squirrels are noticeably more abundant but, as is generally known, they follow the food supply, and where they will be present in the greatest numbers when the season opens on November 1 is a matter of conjecture; quail have increased, although not noticeably so, but the crop is expected to stand as much gunning pressure as it did last season. Reports show many flocks of wild turkeys have been observed throughout their limited range, field officers reporting that more seed stock was left over from last season than the year before. However, they also find that the wet season badly decimated the hatch of young turkeys this spring and summer.

Ruffed grouse were reported as not plentiful in most of the extensive forest areas of the State, and where they are abundant their distribution is noticeably spotty. More raccoons and woodcocks have been observed than for several years. Many groundhog hunters said they enjoyed the finest "chuck" hunting they ever had. By the same token raccoons in a number of counties have increased sufficiently so that both hunters and trappers should enjoy a good season for 'coons this year.

Reports on native woodcock also were fair, and while many of these birds may have gone south before the federal season opens on October 16, the Commission believes that the added federal protection given the native birds by delaying the season will ultimately result in more and better woodcock shooting in the years to come.

Although Pennsylvania is not considered a duck hunting state, there were encouraging reports from many sections, but the famous Pymatuning area for some unknown reason produced far less young ducks than usual. However, more birds nested along the shores of our various waterways and inland lakes, and these, supplemented by the increased southern migration from Canada, should offer some very good duck shooting possibilities when the season opens October 16.

Not much need be said about the large game season. It seems Pennsylvania hunters need not be concerned much about the status of the black bear, at least for the present, because all of the Supervisors in bear country report that the animals are quite numerous, and that in some localities they are causing considerable damage to farmers' corn fields and their livestock. As many as five bear, all large animals, were counted in a single corn field at one time, and field officers have been doing everything possible to allay the ire of the farmers in order to save them from being killed as protection to property. Whether or not bears will be found in like abundance in the same localities by the time the season opens is a matter of conjecture. Right now they have a "corn complex"; later they will probably range more widely in search of beechnuts, acorns, and other food.

Reports on deer conditions are similar to those made in July, namely, that there are too many deer in most sections of the State for the forage available. Damage reports from farmers are giving the Commission much concern.

Unfavorable spring weather conditions, in the Supervisors' opinions, combined to destroy much of the normal nut, acorn and wild grape crop usually available for wildlife, although generally speaking there should be sufficient to carry the game over until next spring provided the coming winter is not too severe. Fortunately the crop of fruits, berries, etc., was unusually large, which has aided wildlife considerably. As a precautionary measure, the Commission recommends that winter feeding programs be organized in the near future.

The Commission thinks the season on the whole will be entirely satisfactory from the standpoint of wildlife but is a little concerned about human life. With industry booming, hunters will have less time to hunt, consequently when they do go afield they are likely to rush about more carelessly in their zeal to make the most of short trips. The Commission hopes that every hunter will study carefully the rules of Safety First between now and November 1, and plan to wear plenty of bright red while hunting.

It is hoped that every sportsmen's organization will at once organize a special Safety Committee for the purpose of teaching hunters in each community how to handle firearms safely and efficiently. This will eliminate accidents, and reduce the needless waste of much game through the loss of wounded birds and animals.

The Commission also hopes that every hunter will respect the right of the landowner. He is the landowner's guest and should behave himself accordingly. Upon his behavior is measured the future of his sport. The more fences that are broken, the more rail piles that are knocked over, the more gates that are left open, the more livestock that is shot, the more depredations of any kind that he commits, the more trespass signs that go up.

There is published prominently on page 32 of this issue a little advice on how to cooperate with the farmer. Read it, follow it, and you will make many friends and insure better hunting for yourself in the future.

John ("Dad") Beck, Painter of Wildlife — see page 19

Over There

Thanksgiving

Over Here

A Message of Thanksgiving

By ROSS L. LEFFLER

President, Pennsylvania Game Commission

PENNSYLVANIA has been blessed in many ways; we have much for which to be thankful. She has been blessed particularly with an abundance of natural resources, especially her green forests, fast-running streams, and plentiful wildlife. These resources, wisely managed, as they have been for many years, have contributed much economically to our people and provided opportunities for wholesome recreation and sport for all.

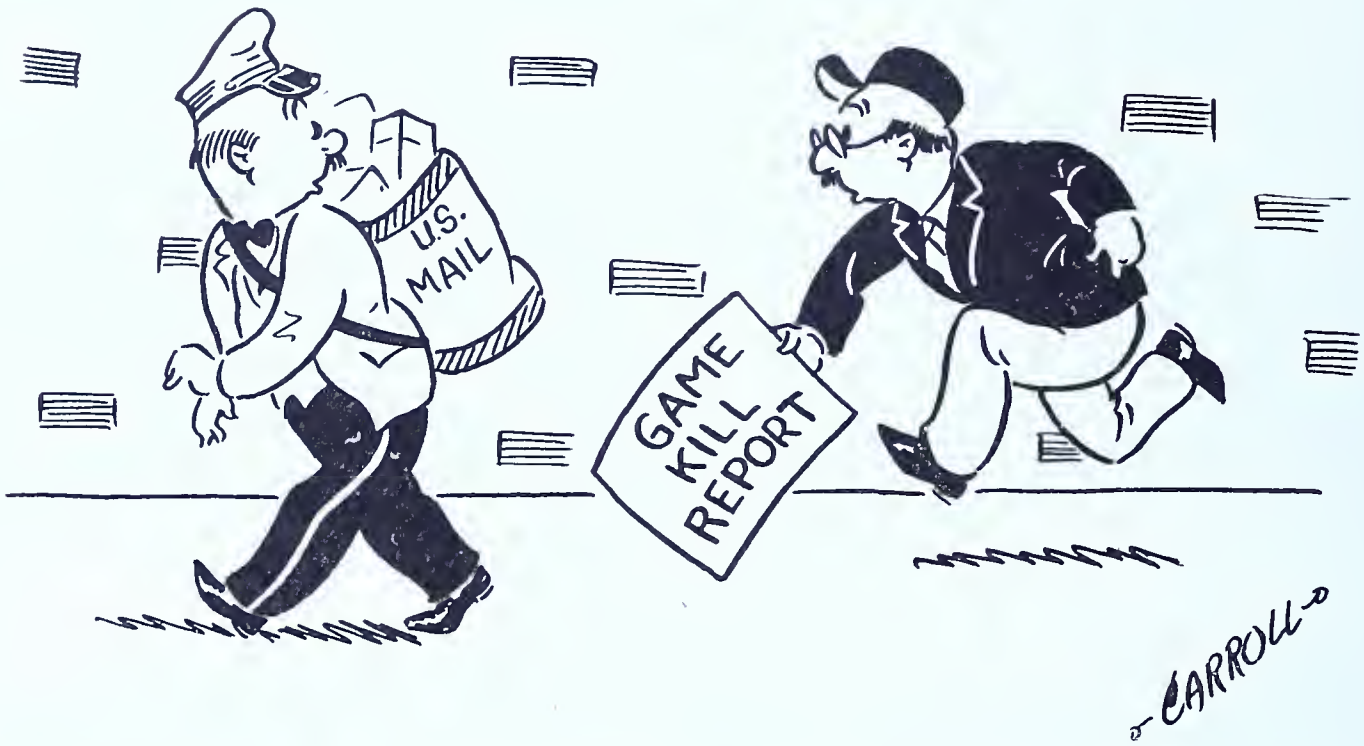
Let us thank God for all of these, and let each one of us cherish and perpetuate them so that those who follow in our footsteps may also have an opportunity to enjoy their numerous benefits.

Especially let us be thankful that we live in a land where every citizen is equal, and where the sports of hunting and fishing may be enjoyed by everyone — the poor as well as the rich. Let us be grateful that in this great industrial empire we still have the opportunity to take our dog and gun afield during the hunting season; that our recreational opportunities are so diversified and plentiful that we put away our fishing tackle and hang up our creel even as we pick up our gun or plan our hiking trips into nature's harvest-time wonderland. Mostly, however, we should be thankful that, in the midst of world strife, with all its horrors, we are a free people; that we may peacefully pursue our daily tasks or pleasures with tranquility.

In Pennsylvania a peaceful army of hunters is again sauntering forth for a well-earned holiday. As bombs burst and the flower of other lands, even the little children, are sacrificed daily upon the bloody altar of war, we in Pennsylvania look with joy and anticipation toward the dawn of each new day.

Thanksgiving, with all its happy family reunions, its glorious traditions, should mean more to us this year than it ever has before. May we never forget, but ever strive to preserve, those blessings which keep us spiritually well, physically strong, morally sound, and happily contented.

An Analysis of Methods used



BEFORE undertaking any business venture, especially in manufacturing, the management first studies the available raw material supply, the prospective customer demand, and the plant and machinery requirements necessary to produce the desired product efficiently and economically.

As the operating processes develop, every progressive business enterprise examines its output critically in the testing laboratory; it spends funds without stint for research; it maintains a constant inventory of raw materials, of stock on hand and disposed of, and of the prospective future demands for its product. The management is constantly alert to make improvements, to do the job better, but it does not tear down the entire plant every time a new idea comes along.

We wildlife administrators are engaged in a business where we must apply like principles and practices if we hope to succeed, if we are ambitious to give a constantly growing army of customers, the sportsmen, the most for their money—and at the same time to avoid dissipation of our foundation stock.

In our case, we are dealing with a more difficult set-up than does the average manufacturer—our stockholders and customers are identically the same. However, in at least one respect are we in the same boat as the management of a business institution: we too must satisfy the stockholders or they will demand a new board of directors, a new general manager.

Our enterprise is unique in that the stockholders all hold the same number of voting shares. The result, as one wit recently put it, is that "Ours is the only business in existence where a man invests $1.00 or $2.00 and immediately tells the management how to run it." This active interest on the part of every hunting or fishing license buyer is well-known to all of you. Mostly this is decidedly valuable; it rarely becomes a liability except when we fail to keep the stockholders fully informed of what we are doing and why.

We all agree that in such an intricate undertaking as wildlife administration is today, with its many factors beyond the realm of human control, constant inventories of the flow of the business and the status of the raw product are essential to sound planning. This is especially true where regulatory responsibility has been imposed upon the administrative agency in charge.

So far no universally satisfactory formula or technique within the realm of financial justification has been devised for securing accurate advance information on the quantity of the breeding stock (except for certain species of big game in the West), and the prospective crop of young, early enough each spring to enable administrators to promulgate regulations for the coming season. However, quite satisfactory sampling technique that serve the purpose have been developed by research workers, and these together with general observations by capable field workers give us a fairly safe guide by which to proceed a season at a time.

On the other hand, quite accurate information may be obtained on the annual game harvest if proper processes are devised and diligently applied. This corresponds to the businessman's record of goods liquidated. While it still does not give us the stock on hand, by regular annual inventories of the crop harvested the general trend may be charted pretty closely. The future may be predicted fairly well on the basis of past performance, and plans altered accordingly. That is exactly what the progressive businessman does. General trends over the years are much more important in any long-term venture than temporary fluctuations.

Reports From States and Provinces

When your President assigned this subject to the writer, he immediately sought from every state, province and territory a few simple facts. The response was fine, reports being received from all but four states and one province. In studying them it was found that only about twenty-two (22) of the reporting states, provinces and territories are making an attempt to collect reasonably complete annual statistics or estimates covering all game taken. They are California, Connecticut, Idaho, Illinois, Massachusetts, Michigan, Minnesota, Montana, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Washington, Wisconsin, Alaska, Alberta, Manitoba, New Brunswick, Saskatchewan, and the Northwest Territories. In quite a number of states, provinces and the territories the law requires reports of the game killed, some of them certain species only, mostly big game, but in only five or six does this requirement seem to be enforced.

Among those which apparently obtain quite complete figures on big game kills are California, Maine, Michigan, New Hampshire, New Mexico, New York, Oregon, Pennsylvania, South Dakota, Utah, Vermont, Washington, Wisconsin, Wyoming, Alaska and Nova Scotia. Louisiana and Maryland collect figures on the kill of migratory birds, Maine on pheasants, and Rhode Island this year is starting to assemble statistics on pheasants, grouse, quail, woodcock, rabbits and squirrels.

No reports have been received from Arizona, Colorado, Delaware, Florida, Nevada and Quebec, and it is assumed that they are not collecting such records.

The questions asked were:

Does your State or Province collect annual statistics on the kill of all species of game?

If yes, please check which of the following methods you use: Complete tabulation of hunters' reports, field estimates only, sample checks only.

If complete tabulation is made of individual reports from hunters, what is highest percentage of reports obtained in relation to number of licenses issued?

* Presented to the 34th Annual Convention of the International Association of Game, Fish and Conservation Commissioners, Toronto, Canada, September 2-3, 1940

to Collect Game-Kill Statistics*

By Seth Gordon

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If only part of the individual reports are tabulated by the "sample check" process, what minimum percentage do you consider a safe sample?

Does your law actually require every holder of a hunting license to submit such a report?

If so, what is the penalty for failure to do so, and is it enforced?

If report from individual hunters is required, is it submitted separately (mailed direct to you) or collected by the license issuing agent when license is obtained for next year?

If individual reports are obtained, approximately how many months elapse after the close of a given season before you have completed your tabulation of the kill?

Do you believe a reasonably complete annual inventory of the kill of game is (or would be) helpful to you in planning your future programs?

Every official except two who replied stated that complete information would, in his opinion, be very helpful in planning future programs. Many of them expressed the hope that they may inaugurate such an annual inventory soon.

An attempt was made to set up a complete tabular statement of the replies for the record, but that was not found practicable. A summarization of the information supplied by a few of those which have been obtaining reasonably complete statistics on all kinds of game, and the lapse of time required after the season before the kill is known, follows:

CONNECTICUT: Highest percentage of reports received was 70.2% (1934), the average over a 15-year span being approximately 60%. Penalty provided but not enforced. Information collected by agents when new licenses are issued. Elapsed time before tabulation completed approximately 24 months. Tabulation also checked by a 20% selective sampling process. (See further comments below.)

ILLINOIS: Reports from 43% of the hunters for 1939. No penalty provided for failure to report. Information collected by agents. From 16 to 18 months elapse before tabulation completed.

MASSACHUSETTS: Reports from 82% of hunters for 1938. Law requires submission of reports to license agents with application for new licenses. Not enforced. Tabulation completed 12 months after season.

MICHIGAN: Obtained 64½% of the reports for 1937. Michigan considers reports from 50% of the hunters safe as a basis for complete estimates. Law requires submission of report direct to Department, but not enforced. Tabulation and estimates completed 6 months after close of season.

MINNESOTA: Highest percentage of reports on big game was 31% for 1932; for small game 51% in 1936. Law requires reports mailed direct to the Department. License for the following year may be denied, but not enforced. From 8 to 12 months elapse before tabulation completed.

MONTANA: Reports from 40% of the hunters for 1939. Law requires mailing reports direct to Department. No penalty for failure to do so. From 3 to 4 months elapse before tabulation completed.

NEW JERSEY: Received 48% of the reports for 1938. Law requires reports be collected by agents. $20.00 penalty not enforced. About 18 months elapse before statistics tabulated.

NEW YORK: Received reports from 66% for the season of 1937. Law requires submission of report to agent when license is issued. No penalty provided. About 12 months elapse before information is tabulated.

NORTH DAKOTA: Obtained 10% of reports for 1939. Law does not require them. Two months elapse before tabulation and estimates completed.

OREGON: Secured 93% of reports for last year completed, collected by license agents. Law requires report but no penalty. Eighteen months elapse before statistics completed.

PENNSYLVANIA: Secured 98½% of reports for 1939 season. Law requires reports be mailed to Department within month after close of season. $2.00 penalty enforced. Tabulation practically completed within 6 months, and before seasons are set for next fall.

WASHINGTON: Obtained reports from 43% of hunters for 1939. 20% considered a safe minimum for tabulation and estimates. Law requires reports mailed direct to the Department after close of season, but no penalty. Six months elapse before tabulation is completed.

WISCONSIN: Received 75% of reports for 1936. Law requires reports be mailed direct to Department after season. Penalty is denial of license for following year, but not enforced. Three months elapse before tabulation, county by county, is completed.

ALASKA: Received reports direct from 62% of 11,749 licensees for 1939. Law requires report and is enforced "to some extent by fines and jail sentences."

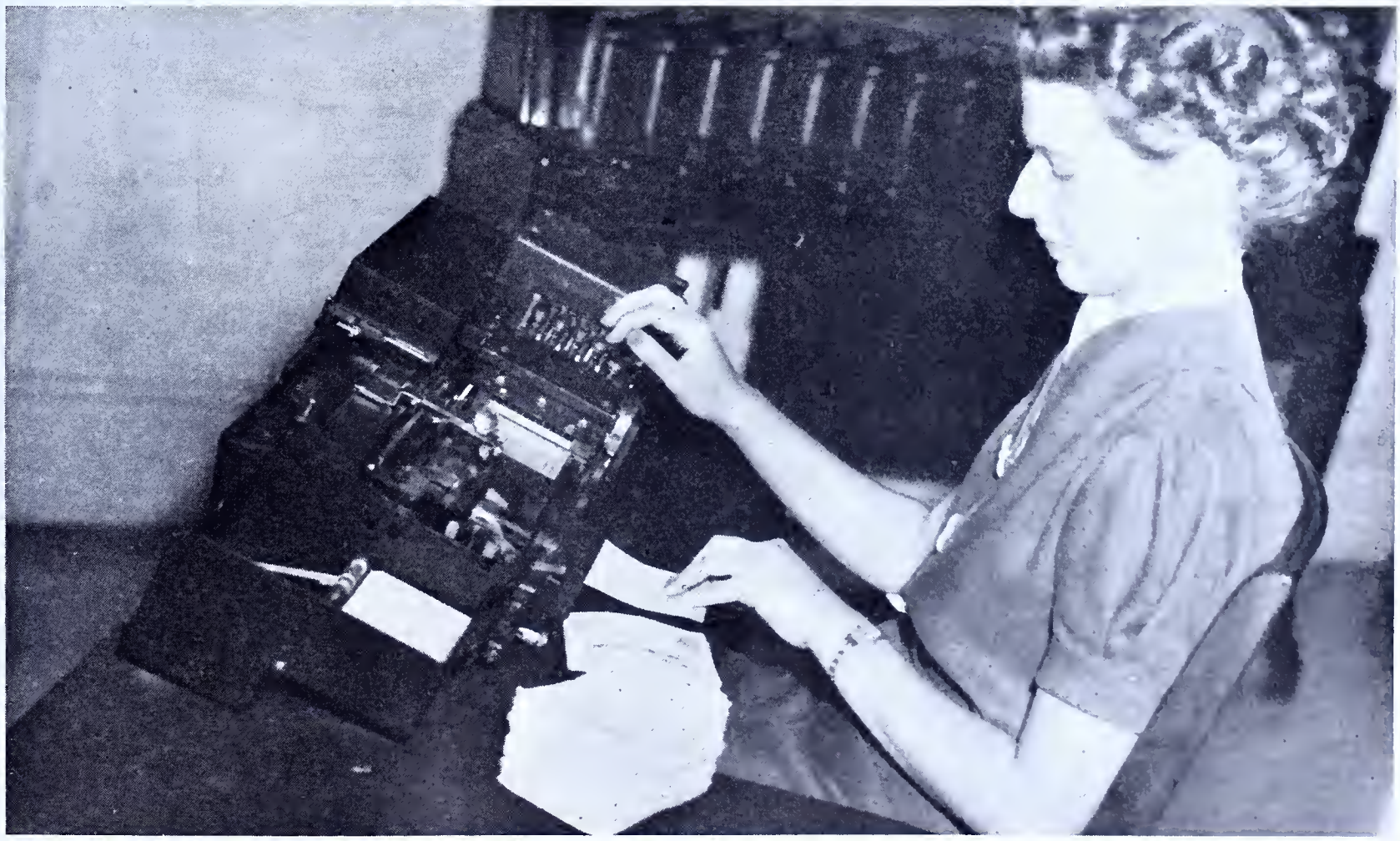
MANITOBA: Received reports from 80% of hunters for 1938. Law requires reports be mailed direct to Department. Penalty is $25.00, enforced if circumstances warrant. Tabulation completed within 6 months.

NEW BRUNSWICK: Received reports from 42% of hunters for 1939. Law requires reports be mailed direct to Department. About 2 to 3 months elapse before statistics completed.

SASKATCHEWAN: Obtained 90% of reports for last year completed. Law requires sending reports direct to Department. Penalty is a fine and no license for following year, which is enforced. Three months elapse before completion of tabulation.

NORTHWEST TERRITORIES: Received "practically" 100% of the reports for 1939, collected by Royal Canadian Mounted Police. Law requires submission of reports. Penalty is no license for the ensuing year, which is enforced. Approximately 12 months elapse before tabulation completed.

(Continued on Page 22)



Key punching Game-Kill Reports onto cards is the first step in the tabulation system.

What Causes Hunting Accidents?

Be careful where you point your gun.

YOU may pick up your daily newspaper in any of the cities or rural communities of the forty-eight States between September and December of each year and, as you review the happenings in the daily world, be startled when you read—

DIED

John Hanson, 32, Wednesday at his home Main Street. He is survived by his widow and three children, Charles Mary, and Joseph.

Let's see; why yes, John Hanson is that healthy young chap who worked at Miller's Store. Nice fellow. Wonder what happened to him?

Inquiry of a mutual friend the following day revealed even more startling news; we were told that young Hanson died of a self-inflicted gunshot wound while hunting for rabbits on Tuesday afternoon.

The story told by Hanson just before he lapsed into a coma: "My dog was chasing a rabbit on the old Neil farm in the field adjoining the abandoned homestead. The rabbit ran up into the woods, and in order to get a better shot I decided to cross an old barbed wire fence. I rested the gun on the bottom strand, pointing towards me. When I stepped on the lower strand of the wire to separate the fencing so Bob Dixon, who was hunting with me, could go through, in some manner the gun went off. The full load of the shot struck me in the chest. I thought the gun was 'on safe.' The shot barely missed Bob."

The sordid facts in this case, with their sad and far reaching results can briefly be summarized in four salient phrases: gross carelessness—a widowed mother—three fatherless children—and a surviving dear friend who nearly lost his life through no fault of his own.

The facts in this and countless similar cases throughout the country are constantly reported in the daily papers. Most certainly they are pathetic.

These are some of the many problems that daily confront game administrators in each of the forty-eight States, in their efforts to devise ways and means of conserving human life and limb for eight and one-half million nimrods who annually take to the field in quest of their favorite recreational sport.

The most disheartening results that the writer has obtained from a single undertaking in some time was derived from an honest and sincere effort to secure competent and reliable statistical data concerning hunting accidents in all the States.

Inquiries to the more progressive States, contained little of value for comparative purposes. Many admitted freely that they kept no record of hunting accidents, and in the same breath bemoaned the annual loss of life, but admitted that they had found no method of coping with the situation. One State reported it was unable to furnish the data as the Department of Health kept the records of hunting accidents. Others stated that the statistical data being furnished was incomplete, and in many instances had not been sufficiently checked to guarantee its reliability. Drownings, suicides, deaths from shock and exposure were included. Combination hunting, trapping and fishing licenses are issued in many of the States, and no separation of accidents was available. These and many other related problems were encountered in attempting the survey.

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Editor's Note: If you can't spare the time to read this absorbing article, and you want to learn the cause of hunting accidents, then read the last three words of this article.

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Pennsylvania has gained national recognition for its conservation program, its protection and restoration of wildlife. Therefore, it seems logical to study that State's experience with the hunting accident problems, scrutinizing every possible detail to obtain clues as to causes and preventive measures.

Containing an aggregate area of 45,000 square miles, Pennsylvania has available for hunting and trapping purposes approximately 35,000 square miles of land for game hunting; in most areas both small and big game can be found, to some extent, in the same habitat.

The rapid growth of industry, agriculture and mining, with all of their ramifications, including the related housing problem, in the Keystone State have slowly but surely reduced the area in which hunting may be enjoyed. Depredations by so-called sportsmen, who have not hesitated to cut wire fences, kill and maim poultry and livestock, have caused thousands of acres of private land to be posted against trespass.

Consider for a moment, if you will, that in 1939, between September and January, there were issued in Pennsylvania 650,000 resident licenses. Non-resident license sales reached almost 9,000. These license sales represent almost ten per cent of the total license sales for the entire United States. Adding to these staggering figures a conservatively estimated 75,000 bona fide resident owners or lessees, or members of their families, who without a license are legally hunting on their own property, and adjacent lands with permission of the neighbors, we arrive at the amazing total of 734,000 hunters afield in just one State with 10,000,000 people.

With an army of hunters of this proportion confining its activities to a relatively short general hunting season of thirty-nine shooting days, between November 1st and December 15th, accidents are bound to result, **regardless of the number of safety laws** that are passed and rigidly enforced. It is true that the thirty-nine shooting days referred to above do not include the three-month woodchuck season commencing July 1st and continuing until September 30th, however, the hunting for these popular animals is not nearly so intensive as the general open season.

What, if anything, has Pennsylvania done to promote human conservation while hunting? No State in the country has as many laws designed primarily for human safety, and rigidly enforced. Let's take time to brevitize each of them, despite the fact that there are twenty-five. The section references are to the present Pennsylvania Game Code:

Sec. 314—Permits a Game Protector to seize the hunting license and tag of any licensee found using firearms to hunt while under the influence of intoxicat-

By W. C. Shaffer

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ng liquor or narcotics, and provides other punishment.

Sec. 315—Gives the Commission the right to revoke the hunting license of persons who: Commit assaults upon landowners, lessees or their employees; injure human beings by gunfire or bow and arrow; are guilty of carelessness or negligence with firearms or bow and arrow; refuse to render assistance to persons injured while hunting or trapping; cause a hunting accident and flee or fail to render assistance.

Sec. 316—(b) Forbids persons under 12 to obtain a hunting license.

(c) Forbids persons under 16 to receive a hunting license without the written consent of a parent.

(d) Prohibits persons between 12 and 14 to hunt with firearms unless accompanied by some member of the family over 21; and persons between 14 and 16, unless accompanied by an adult at least 21 years of age.

Sec. 501—Only male deer with two or more points to an antler may be killed during a regular open season, thus saving human lives by requiring positive identification of an object before the gun is discharged.

Sec. 702—Permits hunting only between 7:00 A. M. and 5:00 P. M., Standard Time, and further forbids, by resolution of the Commission, hunting on the first day of the open season until 9:00 A. M.

Sec. 704—(a) Makes it unlawful:

To shoot at any wild bird or animal unless it is plainly visible.

To shoot at any wild bird or animal from an automobile or other vehicle propelled by mechanical power.

To use a silencer.

To make use of a "set-gun", a device set to discharge a deadly missile in the absence of the owner.

To use a pit-fall.

Sec. 805—Makes it unlawful to hunt or trap, or enter any field, forest, land or stream, while possessing a firearm, or bow and arrow, when intoxicated or under the influence of intoxicating liquor or narcotic drugs.

Sec. 806—Makes it unlawful to possess a loaded rifle or shotgun or a rifle or shotgun from the magazine of which all shells and cartridges have not been removed, in an automobile or other vehicle standing or being driven upon or along any highway used by the public.

Sec. 807—Makes it unlawful to shoot at game while it is on a highway used by the public, or to shoot across such highway while hunting game, unless the line of fire is sufficiently high to preclude any danger to the users of the roadway.

Sec. 808—Prohibits shooting within 150 yards of any occupied buildings without permission of the occupants.

Sec. 810—Limits parties hunting small game to five (5) persons.

Sec. 815—Controls target shooting during big game season by requiring targets to be properly protected so that the bullet cannot continue more than fifteen (15) yards; also prohibits random shooting in the general direction of a human being, or in the general direction of a bird or animal to rout same.

Sec. 820—Prohibits all shooting upon the grounds of a sanatorium, institution or park, when posted against hunting.

Sec. 825—Makes the shooting of human being in mistake for game or any wild creature punishable by heavy penalties, including imprisonment, payment of cash penalties to persons injured, or the estate of persons killed, and revocation of hunting rights from two to ten years.

Sec. 830—Requires hunters or trappers causing injury to human beings by gunfire, or bow and arrow, to report to the Commission at Harrisburg within seventy-two (72) hours, on forms provided for that purpose.

Sec. 835—Requires hunters who injure human beings by gunfire to render immediate assistance to the person injured, imposes heavy cash penalties and revocation of hunting rights for ten (10) years for failure to do so.

Sec. 1002—Forbids aliens to hunt or trap, and to that end, makes it unlawful for them to possess a gun or a dog, of any kind.

Michigan lists eight laws relating to safety features and New York, nine.

It appears certain that in Pennsylvania little could be added by legislative action; the causes and remedies for accidents must be sought elsewhere.

How many persons were injured or killed in Pennsylvania during the past hunting season? Well, that is a comparatively easy question to answer.

For twenty years Pennsylvania's Game Protectors have been required to make an accurate check upon each accident occurring in the counties under their jurisdiction. Since 1937 it has been compulsory that any person causing an injury to himself or another, by gunfire, while hunting shall personally or through his agent file a report within seventy-two (72) hours following the accident. As indicated, penalties are provided for those who fail or neglect to make the report.

While the report is a simple one, nevertheless it is complete. The form provided for this purpose makes inquiry concerning weather and light conditions, firearms used, the place and hour of the accident, species of game being hunted, ages of both victim and offender as well as the hunting experience of each, distance between victim and offender, whether or not both victim and offender were wearing red, whether the victim was shot in mistake for game, and if so, the specie. Pennsylvania, by the way, is one of few States that differentiates between "mistakes" and "accidents" in the hunting field.

Consciousness of the legal requirements in reporting accident cases, and the willingness of sportsmen fully to cooperate causes many persons to render reports when they are not actually required. Automobile accidents involving hunters, bodily injuries resulting from falls, and definite cases of heart failure or suicide are discarded immediately after preliminary review.

These reports are most essential and extremely beneficial in tabulating accident data, and as an aid in studying causes and effects. They are put to a dual use in Pennsylvania, serving as a basis of preliminary review for the hearing referee, who later in the year holds hearings on all important cases, then makes recommendations for license revocations to the Commission wherever it appears that careslessness or negligence has caused the injury by gunfire.

You can study statistical hunting accident data in every conceivable manner, but in determining causes the figures appear to be of little value. A common denominator seems impossible to find. Groupings compared and studied produce irrational and irrelative data. The studies reflect little of value, because of their widespread divergency.

It will be well, however, to review the statistics gathered by Pennsylvania for the 1939 season and which are complete from September 1st, 1939 to January 31, 1940.

Every student and author on the subject has said, "Hunting accidents just don't happen—they are caused." I am convinced that I can offer nothing to contradict these gentlemen. Many of us seem to learn the hard way. Guns must crack, hunters cry for help, and blood be spilled before we are convinced that these so-called accidents are horrible, but worthwhile conclusions as to causes are difficult to reach.

It is evident that there are two major and many contributing causes. No reasonable sequence of importance can be stressed. Often more than one contributory cause is found in a single accident case history.

Considered separately, the contributing causes can be grouped as follows

(a) Lack of sufficient knowledge of the mechanical operation of the firearm used.

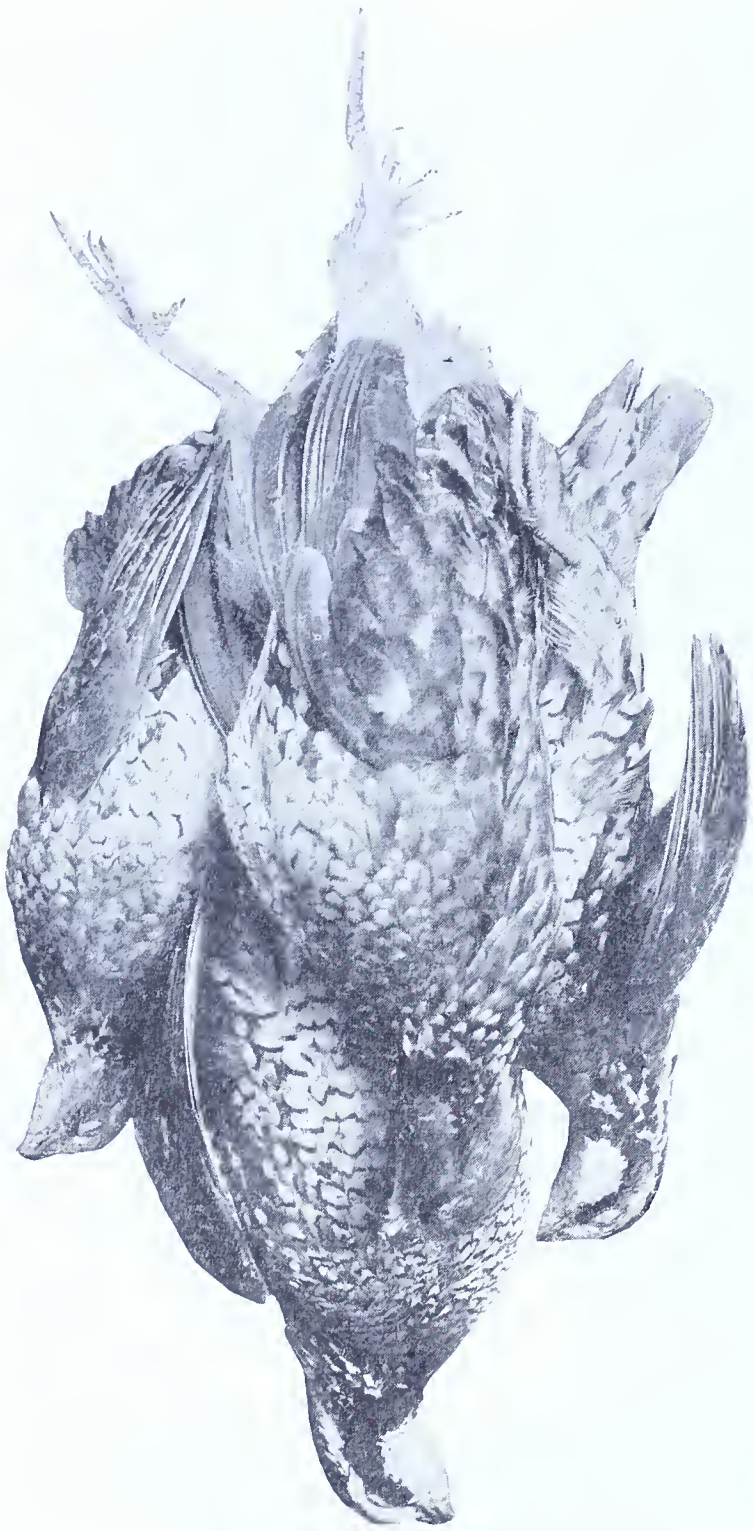
(b) Faulty and defective equipment, unfit for use.

(c) Lack of knowledge of habits and movements of species of game being hunted.

(d) Improper clothing, such as the wearing of clothing which blends with natural surroundings, unmarked by the display of any red clothing or cloth of sufficient size to make the hunter clearly distinguishable. Dark blue coats, brown felt hats, gray trousers or gray sweaters, all have been contributing factors to hunting accidents.

(Continued on Page 24)

If you want to leave this world in a hurry handle your guns like these chaps are handling theirs.



Photos by S. H. Cope

How to Prepare

By C. S. Landis

IN general, always remember these few things in regard to cooking small game. Both squirrels and rabbits should be dressed or "gutted" as soon as shot, and permitted to dry before sticking in the gunning coat—otherwise the animals will smell very offensively when opened in the evening, particularly if the entrails are pierced, and the weather is warm. Game so dressed will keep splendidly in a refrigerator. They both keep best if the hide is left on, because then the meat does not dry out, but our people always preferred to soak in salt water for an hour or two. Then take out of the salted water, drain the water off, and place in a refrigerator or other cool place.

The way to skin a squirrel or a rabbit is to take a sharp knife and make a cut clear across the back, over the kidneys, through the hide, so the hide is separated into two parts, front half, back half. Then pull both ways, getting fingers under hide, and skin the front one-half of the animal first, as it is more likely to tear in half, if the rear half is skinned first. That makes it more difficult to get the hide off, and the front legs out of the hide that covers them. The next thing is to carefully scrape ALL fur or hair off the meat—this being particularly important. Wash off and pick off with paring knife or fingers.

The worst way to cook rabbit is to stew it. There are two better ways. Parboil and then fry. Or make meat cakes with potato (mashed-Irish), parsley, pepper, onion, ground together and made into cakes with the potato and egg.

Both squirrels and rabbits must be parboiled until tender before the meat is picked off the bones and run through the meat grinder.

Dress ringnecked pheasants, ruffed grouse and quail the same. Pick dry or slightly scalded, then dress and soak a bit in salt water. When ready to cook, stuff and roast, like chicken. Use parsley, peppers or chestnuts as preferred, in filling.

Some of Mrs. Landis' favorites—will vouch for them—are as follows:

Squirrel potpie is just fine. Parboil, place in pie, with dough, and use one or two quail, pigeons, squabs, or ringneck meat or grouse, in the same pie. Squirrel and bird together make a better pie than squirrel alone. Use plenty of parsley in pie. Some like a bit of onion, most do not. Many use thyme on game roasts, including my wife. Best in the filling, but small sticks sometimes get in the throat. That bothers some persons, in which case put thyme in gravy instead of in bread filling.

There is one thing that should be remembered and that is, the exact time it takes to cook a meal of game. You simply cannot be certain it will be one, two, or three hours. Gas stoves have a way of being very hot one day, and low flame the next. Some birds look tough and cook tender quickly. Others look young and take an hour and a half longer than expected. A coal stove is one thing, a wood burning stove another, a gas is two things, one when it is new and well insulated and another when it is older and the thermometer on the oven reads higher than it actually is registering heat. An electric stove is still another proposition.

Another problem is the chap who shoots one of each of 5 different things, no two of them the same age or degree of toughness. Some must be cooked twice or three times as long as the others. It puts a woman in a bad way. If she isn't pretty darn careful she will burn something. or else loose her temper and start to throw things.

Fried Rabbit or Fried Squirrel

Two rabbits of medium size, or two or three squirrels should be selected, cut into pieces and parboiled until tender. Dip pieces in beaten egg and roll in cracker dust (some like cornmeal). Heat grease in pan, and when hot, drop pieces of rabbit or squirrel, covered with cracker dust and egg, into the hot fat. Do not use too much lard. On the other hand, do not permit to burn. Fry until golden brown. Serve hot!

Chili sauce, ketchup, cranberry sauce, pepper-slaw, or chow chow add much to the tastiness of this dish. So, also, do light and fluffy. hot biscuits!

Editor's Note: The author of this article, who is at present preparing a book on game recipes, had about 10 years experience as a Civil Engineer in his younger manhood, and some of these years were spent on the road mapping the early trunk lines of one of our more important Eastern states. An engineering corps personnel soon becomes the world's most expert critics of the cooking skill of those who are reputed to be "the best cooks in the neighborhood." He can say from some observation, that not more than 33% of the persons described as "the best cooks in the valley" are really expert and capable cooks, consequently the need for expert assistance in the preparation of game animals and birds needs no comment. With industrial and family training as they are today, where many young women receive very little experience in learning how to cook and to prepare meals before being married, having spent much of their early lives in business offices, and often with little opportunity to add to this skill, for some years thereafter, these comments are offered without apology and with the hope that they may help some who may read this work, to dress, prepare, and cook to best advantage the toothsome and nourishing small game this country affords.

Proper credit has been extended to those who have placed this knowledge and information at your disposal.

and Cook Small Game

Any left-overs of fried rabbit or squirrel or any unfried portions, need not be wasted, but may be used later in meat croquettes.

Rabbit or Squirrel Croquettes

One or two rabbits depending upon size of game, and number in family; or two to four squirrels. Cook in salt water until tender and remove the meat from the bones. If cooked too long the meat will fall off the bones. If not cooked long enough, it will still adhere too tightly. Be careful to remove all small bones and especially any bone fragments, from cooked meat. Then put pieces of meat through a meat chopper or grinder, set to cut fairly coarse. Also feed through the grinder, 3 or 4 stalks of celery, one onion, (small or large depending upon flavor desired), one sweet pepper. Mix together. Boil and mash, 6 nice sized Irish potatoes, add salt, butter, milk and one egg. Do not make too mushy. Add the meat to potatoes and form into croquettes. Fry in hot Crisco. Brown, and serve hot with Chili sauce!

Gravy For Croquettes

After removing croquettes from hot pan, add the broth in which the squirrels or other game cooked, bring to boiling point, add flour thickening and cook 3 or 4 minutes, until smooth. Serve upon croquettes or upon mashed potatoes.

Food Eaten by Game Affects Taste

The food upon which small game animals have fed, their age, the time of year, whether warm or frosty, all have a bearing upon their odor and taste. Woods rabbits may be stronger than field rabbits.

It is best to choose younger cottontails for frying, and if sufficiently small and tender of meat, they may require no parboiling. The larger rabbits may be used in meat cakes. In case of squirrels, do likewise. If a choice of game is possible, it is best to select those which upon inspection or feel, appear preferable for cooking. Rabbits or squirrels with plenty of kidney fat, and fat along the inside of the back, shot late in the season, when the weather is real cold, will usually be much more tasty than game bagged in warm weather at the start of the season.

An apple or two, in the roasting or frying pan, will tend to absorb and therefore, to remove from the game, strong odor or flavor which same find objectionable. Some persons prefer game to hang for weeks before cooking, and be highly seasoned. Others prefer it fresh.

Baked Squirrel Potpie

Cut up one to three gray squirrels into 3 or 4 sections. Cover with water and when brought to boiling point, add ½ cup of diced celery, ½ green pepper cut into small pieces, salt and pepper. Let boil until squirrel is almost tender, then add 4 nice sized potatoes cut in halves or quarters—depending upon size, and cook until both squirrels and potatoes are soft.

Take a deep baking dish, grease well with Crisco, and line with biscuit dough thinly rolled out.

Pour stew so made into dish and drop 3 or 4 tablesponsful of biscuit dough in. Then cover the top with roof of biscuit dough, rolled as thin as the lining of the dish.

Bake in oven at 400° for ¾ hour. Serve at once, and serve hot.

Dough For Biscuits

Two cupfuls of flour, ¼ teaspoon of salt, 4 teaspoonfuls of baking powder. Put dry ingredients into sifter and sift twice. Cut in 2 tablespoonfuls of butter, then add one egg and enough sweet milk to make a dough. Handle lightly and quickly. Put these lumps or parts of dough in the potpie before putting on the top layer of biscuit dough.

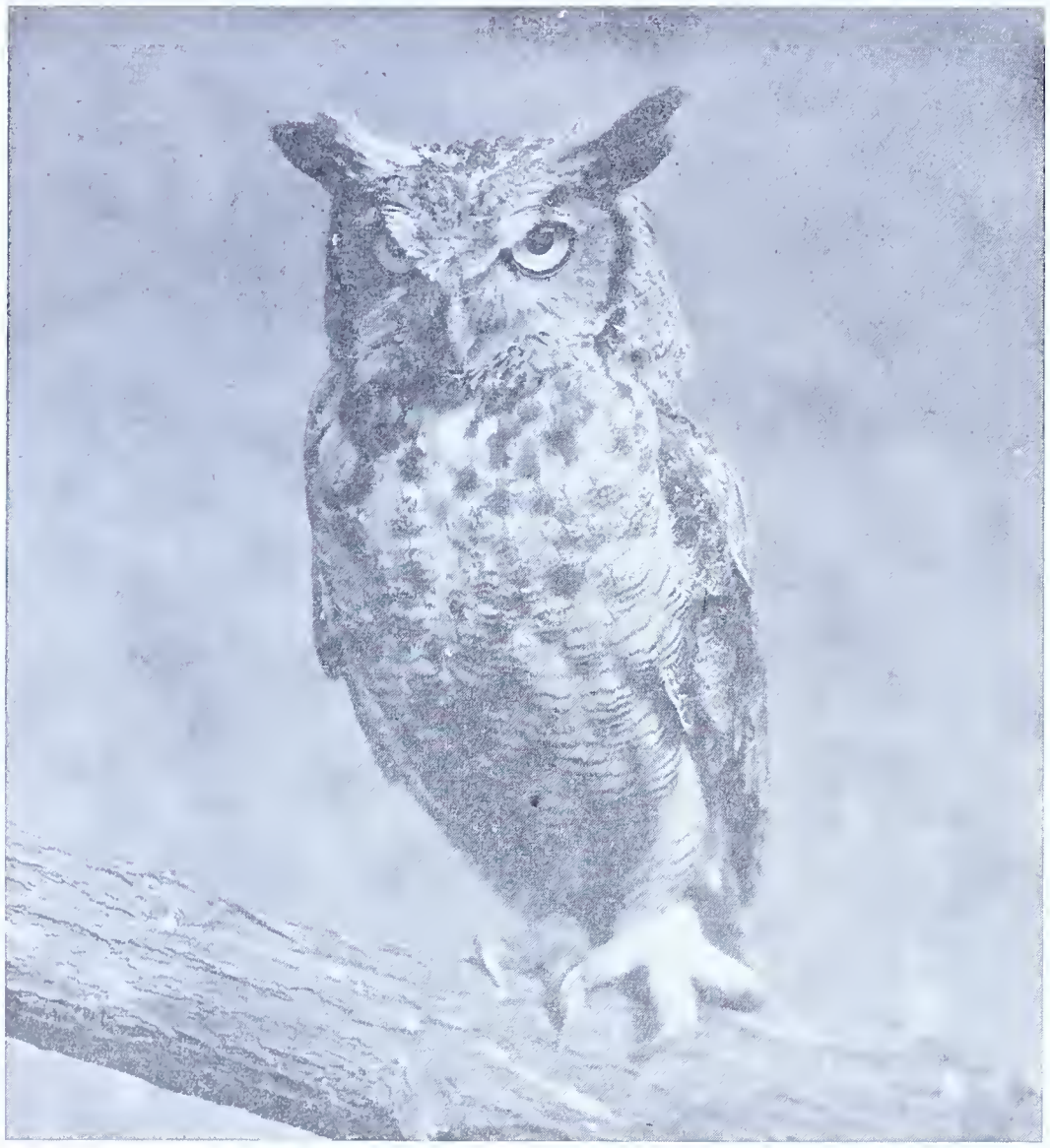
Roast Ringneck Pheasant

The cock ringneck pheasant is a very rich game bird, but is a bit difficult for some to digest it stuffed, roasted, and eaten with rich gravey poured on the filling. It tastes very much like guinea fowl, but with more body and game flavor to it.

(Continued on Page 29)

THE GREAT HORNED OWL

By R. D. McDowell



When too abundant, the Great Horned Owl, like any other predator, must be controlled.

THE GREAT HORNED OWL is indigenous to all sections of Pennsylvania. During the two bounty periods extending from Nov. 1, 1937 to May 31, 1938 and from Nov. 1, 1938 to May 31, 1939, 1,676 mature and 165 fledgling birds were presented for payment. In the interim and from May 31, 1939 to Dec. 31 of the same year, a few additional birds were received. District Game Protectors also forwarded some specimens to the Harrisburg Office for stomach analysis. All in all, 1,930 birds were received and examined.

The map (Fig. 1) on page 11, indicates the counties from whence these birds were obtained. The encircled numbers, representing fledgling birds, constitute actual nesting records of the Great Horned Owl in Pennsylvania. In this article fledglings are classified as those individuals which were hatched in early spring and presented for analysis before June 1 of the same year. Any bird presented after Nov. 1 in the same year it was hatched was considered a mature bird. The term "maturity" therefore was based upon the ability of the individual to obtain its own food, rather than upon its ability to breed. A close examination of this map reveals an apparent population concentration in the glaciated northwestern and northeastern corners of the Commonwealth.

Weight and Measurements

This species is Pennsylvania's largest native owl, smaller only than our infrequent visitor from the North, the Snowy Owl. Since not many weights and body measurements of the Great Horned Owl have heretofore been available the chart presented on page 29 (Fig. II) may be of interest to the reader.

A word concerning the method of securing this data might be added. All birds were weighed on an approved beam scale, accurate to one one-hundredth of a pound. The wingspread was recorded as the distance between the longest outspread primary feather on the left wing to the corresponding feather on the right wing, with the bird lying on its ventral surface. The length of the bird was recorded as the distance from the tip of the upper mandible to the longest tail feather, when the bird was placed on its dorsal surface. These two latter measurements were made on a linear scale set up in one-tenths of an inch. A bird unfit for any one of these measurements, due to injury of the wing, head, or tail, was rejected insofar as that one particular measurement was concerned.

During the study 895 adult males and 772 adult females were received. Due to putrefaction or to dressing of the birds, the sex of 46 mature individuals was not determined.

★

The fledglings included 59 males, 73 females, and 85 birds of undetermined sexes.

Food Habits

Of most interest however to sportsmen, farmers, and game managers, are the facts concerning the food habits of the Great Horned Owl. A chart of the diet of 983 specimens is presented in Figure III. The remaining 947 birds received either contained no food in their stomachs, had already been dressed, or were too badly decomposed to permit handling. It might be noted here that a majority of the trapped birds contained empty stomachs. In view of this fact it would appear that the digestion of food is rapidly accomplished.

During the first year's work all food was placed in a solution of ethyl alcohol until putrefaction has ceased. However, with the system of classification of stomach contents developed this first year, it was found unnecessary to continue this practice the second year, when all food items were identified immediately following receipt of the specimens.

The first fact noted in the study of this bird's food habits was that 90.55% of the diet consisted of warm blooded animals, the mammals and the birds, little preference being shown for the cold blooded reptiles, amphibians, fish, crustaceans, gastropods, and insects. Some vegetation appeared in the stomachs, but it is the writer's belief that this matter was unintentionally eaten simultaneously with the devouring of prey, therefore vegetative matter was not calculated in the diet charts. The discovery of gravel and small stones in the course of analysis invariably appeared to denote the presence of another bird's crop in the owl's stomach. However, in such cases the record of birds eaten does not appear in Figure III. All identifications were based upon the presence of characteristic bones, feathers, fur, appendages and smaller items which lead to positive identification of the prey. **None were based upon a presumption or a surmise**, thus the "unidentified" groupings.

Conclusions

An economic view of the Great Horned Owl's diet reveals that 67.3% of its prey consists of animals usually considered beneficial to man, 26.4% consists of animals detrimental to man, and the remaining 6.3% falls into a neutral classification.

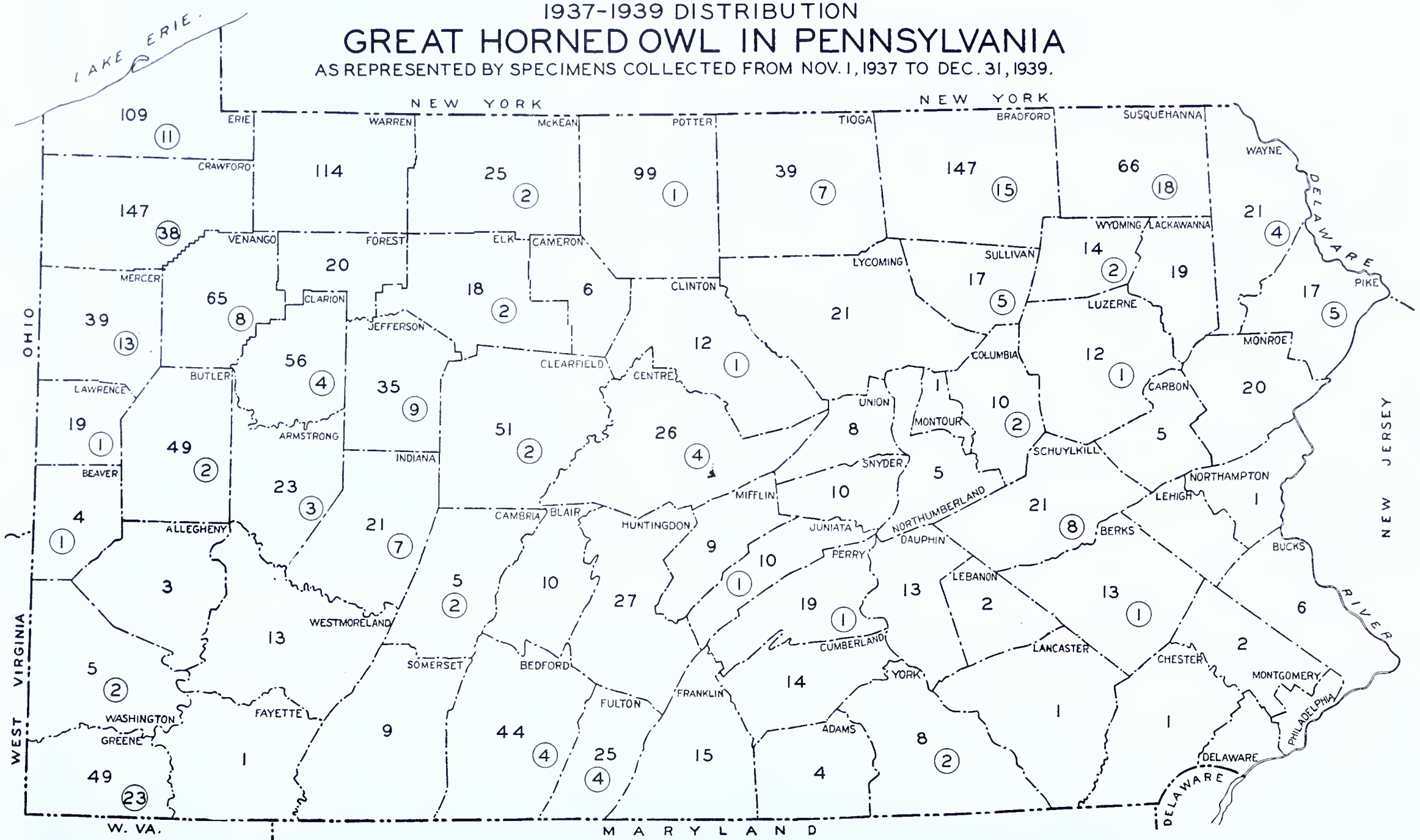
In view of this fact it is clearly evident that this owl is an undesirable predator which in the interest of sound game management practices, at certain times and in certain places must be carefully controlled. Since, however, most of the specimens presented in claim for bounty were killed by hunters either in the open gunning season, or during the spring months when various

(Continued on Page 29)

1937-1939 DISTRIBUTION

GREAT HORNED OWL IN PENNSYLVANIA

AS REPRESENTED BY SPECIMENS COLLECTED FROM NOV. 1, 1937 TO DEC. 31, 1939.



LEGEND:-

PLAIN NUMBERS - MATURE BIRDS
ENCIRCLED NUMBERS - FLEDGLINGS

TOTAL NUMBER OF INDIVIDUALS SHOWN, 1916,
INCLUDING 1700 MATURE AND 216 FLEDGLINGS.

WHAT FEDERAL AND STATE AGENCIES

A Report of the 34th Annual Convention of the International Association of Game, Fish, and Conservationers and the 70th Annual Meeting of the American Fisheries Society.

★

Photo by U. S. Fish and Wildlife Service

Two important refuges have been developed in the Northwest Territories. One of 15,000 square miles was established primarily to protect the muskox.

AT the thirty-fourth annual convention of the International Association of Game, Fish and Conservation Commissioners, and the 70th Annual meeting of the American Fisheries Society held in Toronto, September 2 to 6, Pennsylvania was not only represented but upon that representative, Seth Gordon, Executive Director of the Game Commission, was bestowed the presidency of the International Association and one of the few honorary memberships in the American Fisheries Society. Mr. Gordon was active in both groups for many years, and Pennsylvania has been represented at all but a very few of the association's meetings since their organization. It was the second time Pennsylvania was recognized by the International Association. Honorable Ross L. Leffler, the Commission's president, was elected president some years ago.

While time and space does not permit GAME NEWS to record a detailed account of the program, it is believed the highlights should be mentioned because of late years Pennsylvania sportsmen have been taking more interest in national conservation affairs and in the affairs of the other states. They believe, as the Commission has always believed, that one can always learn a lesson from the other fellow. The attendance at the meeting, notwithstanding the fact that the Dominion of Canada is at war, was exceptionally good and more than half of the States and Provinces were represented.

P. Randolph Harris, of New York City, representing the Camp Fire Club analyzed the case of the North Carolina Department of Conservation vs. the U. S. Forest Service with regard to future jurisdiction of the wildlife on the Pisgah National Forest fully and discussed its present status. He stated that the appeal was argued before the Fourth Circuit U. S. Court of Appeals, and that on August 30 the said court had affirmed the decision of the lower court.

In discussing the underlying fundamentals he said that if the contention of the Federal Government is sound the right of the several states to make regulations controlling the taking of game and fish ceases, and is transferred to the Federal Government, on all National Forests within the states. He recommended that the case be appealed to the U. S. Supreme Court, and that no action be taken to secure remedial legislation in Congress until the Supreme Court has disposed of the matter.

In view of the decisions already rendered, he was unwilling to predict the final outcome before the Supreme Court, but obviously was not at all hopeful for a reversal of the lower courts. In his opinion a sharp line of demarkation must be drawn beyond which the Federal Forest Service must not go in interfering with the administrative functions of the several states in their fish and game management.

In the general discussion which followed, a number of questions were cleared up. Mr. Stephens, Chairman of the Missouri Commission, asked if the courts had passed upon the right of the State of North Carolina to cede to the Federal Government its right and responsibility to manage the wildlife on National Forests within its boundaries, and was advised that this question has not been passed upon.

In answer to a question as to the effect of the North Carolina case in other states, Mr. Harris stated that much depends upon the wording of the laws of the states giving their consent to the Federal Government to buy lands for National Forests. He felt that it would be difficult to recommend remedial legislation to the states without studying each of said acts separately, and that the principal effect would be to establish definite restrictions on purchases made **after** the amendments are enacted. For that reason it was his opinion that Congress is the proper body to remedy the whole situation if the Supreme Court sustains the lower court. He advised that any repeal or modification of present consent laws would not change the situation with reference to lands already purchased thereunder.

At the conclusion of the discussion the convention authorized and directed the President of the Association to expend not to exceed $750.00 to intervene as an Association in the case before the U. S. Supreme Court.

Hoyes Lloyd, Supt. Wildlife Protection, Department of Mines and Resources, Ottawa, Canada, summarized Canadian wildlife conditions at the present time and called attention to the effect of lowered water tables and diseases on the duck supply, especially botulism, which has broken out in some of the Canadian Provinces recently. Some of the large bodies of water in Western Canada are now six feet below normal, which has dried up enormous areas of duck breeding and feeding marshes. He praised the help from American sportsmen in the restoration of marshes, and stated that the Dominion's current farm program, especially the restoration of water supplies to help the farmers, has been invaluable to the waterfowl of the Continent. More than 8,000 such projects of various kinds have been completed in the Prairie Provinces.

Mr. Lloyd reported that on the whole the waterfowl situation has improved noticeably this year, but he urged that steps to conserve the supply be continued. He did not favor further relaxing of the hunting regulations in Canada or the States.

In a discussion of the main objectives of U. S. Forest Service in the management of wildlife, Dr. H. L. Shantz, Chief, Division of Wildlife Management, U. S. Forest Service, very clearly explained their views with reference to wildlife management needs. He stated that, like other agencies, the Forest Service has often controlled the taking of certain species of game too well, **but not too wisely**, but that he has found a decided improvement in state wildlife programs in recent years.

The Forest Service has learned that the biggest problem is the man-to-man-relationships on the National Forests, and that a balanced program on said lands is difficult to attain because of the conflicting human interests.

Three-fourths of the Nation's forest lands are in private ownership. The balance is owned either by Federal or State Govern-

ARE DOING FOR WILDLIFE

ments. In 1908 there were only 200,000 or 300,000 head of big game animals on the National Forests. Now there are almost 2,000,000. Private lands adjacent to the forests often make it difficult to handle the big game herds efficiently, because they summer on the forests and are down on private lands during the wintertime.

One rather striking comment made by Dr. Shantz was that **in hunting big game, buck kills alone do not produce good management, and that a kill of big game which is non-selective** (animals of both sexes and all ages) **is the only remedy;** also that public administrators can not justify losses by starvation and disease epidemics due to malnutrition. He stated the only sensible thing is to reduce the herds to the carrying capacity of the range.

Commenting on the relationships between the U. S. Forest Service and the states, Dr. Shantz stated that the Forest Service must work through and with the state departments satisfactorily to manage wildlife, especially big game herds, but that unfortunately many states lack adequate regulatory control to handle the many situations which arise.

Dr. Ira N. Gabrielson, Director of the U. S. Fish and Wildlife Service, spoke concerning the development and prospect of American wildlife conservation. He said that he had spent several months in Alaska during the past summer and that in his opinion Alaska has in the past been greatly under-estimated as a producer of waterfowl. He found vast areas which are not as fully populated with breeding birds as they might be.

While the prospects are that larger flights of waterfowl will come south this fall, he predicted the time is coming when the flights will again come in decreased numbers unless great care is taken.

He reported heavy winter losses of doves and woodcock in the south last winter, which necessitated curtailment of shooting privileges this fall. **He requested officials to make a special check on the flights of woodcock this coming season.** In this respect our own field officers and sportesmen can help a great deal.

In commenting on the Federal Aid Program, Dr. Gabrielson stated that he is more than pleased with the way the states have cooperated, and that only four states remain which are not qualified to participate. He said that in no other type of Federal-State Cooperative Program has such rapid progress been made, claiming it was due to the manner in which the state agencies in charge of wildlife have done their part.

The importance of education and law enforcement in wildlife programs was discussed by Hon. F. Donald Phillips, Judge, Superior Court of North Carolina, who reviewed the origin of our laws on wildlife in North America. He stated among other things that **no benefits are derived from any law unless judiciously enforced, and that laws which are not enforced should be repealed and removed from the statute books.**

He said that great care should be taken in selecting men to enforce game and fish laws, and that prosecutions should not be brought where there is insufficient evidence to assure conviction, because failures to convict always create disrespect for the law. He claimed that where laws are fairly and judiciously enforced public respect for them increases; where partiality is shown respect for the law soon wanes. He gave a number of personal experiences as a prosecuting officer and a Judge to illustrate his points. In conclusion he stressed the need for an educational approach to all law enforcement problems.

A heavy winter loss of woodcock in the South last winter necessitated curtailment of shooting privileges this fall.

Education was also stressed by David A. Aylward, President, National Wildlife Federation. President Aylward stated that the field of conservation is full of experience and knowledge that has not yet been reduced to a form which can be used in the places where it is needed most, and that conservation education should always be the major objective of the National Federation. He believes the public must be impressed with the fact that waste of our natural resources directly affects every citizen of the land.

He stated that what is needed now is a suitable course of conservation education in the public schools, and that care must be taken to develop the program so that it will meet with the approval of school authorities. He reported that the National Federation is developing special educational material for the use of teachers in the third to the eighth grades.

Mr. George Lundy, Director of Organization for the National Wildlife Federation outlined the results of a survey to ascertain whether the schools can be induced to use conservation education material if properly prepared. (This outline was similar to the one presented to our State Federation in February and recently to a special conference of persons invited to meet with them in Harrisburg.) He assured the administrators that the educational material which the National Federation is preparing will be carefully checked so that it will meet with their approval; that it will be sound from the standpoint of conservation, and also acceptable to the public schools.

D. N. Graves, Secretary, Game and Fish Commission, Little Rock, Ark., commented on the progress made in conservation work in recent years, and gave a good resume of the enormous growth in Federal wildlife activities. He stated that in the past five years such work by the Federal Government had increased approximately 500%. In the State of Arkansas funds available for wildlife activities have increased 100% in the past three years, notwithstanding the fact that the license fee was increased only 40c ($1.50 instead of $1.10). In his opinion the job which now confronts many of the administrators is largely one of education.

Seth Gordon, Executive Director, Pennsylvania Game Commission, presented an analysis of methods used to collect game-kill statistics which aroused helpful discussion. His report in full appears elsewhere in this issue.

Alexander T. McLeod, Executive Director, American Fur Merchants Association, Inc., New York City, stressed the value of fur animals as a natural resource. He said that the American Fur Merchants Association is doing the best it can to help conserve the fur resources of the Continent, but pointed out that complete statistical data on the catch of raw furs are essential to future management.

Considerable discussion followed his address, during which suggestions were made concerning methods by which his Association might be helpful to the administrators. Among them were: That his Association discourage the taking of unprime furs by refusing to buy skins caught out of season; and that instead of trying to contact the general public they work primarily through

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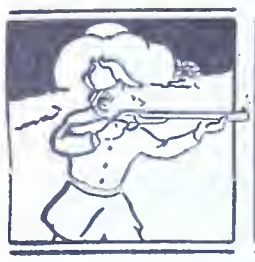
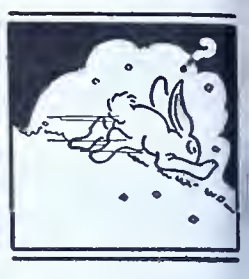


SPORTSMEN'S QUERIES



By CHAS. F. STAMBAUGH

SERIAL NUMBERS OF GUNS NOT REQUIRED

Q. I read in the newspapers that it is necessary to give serial numbers of guns when getting a hunting license. What should be done if a gun is obtained after the license has been purchased? Also, what should you do if you do not hunt with your own gun?

E.M.—Philadelphia, Pa.

A Apparently you have misunderstood the news item, as it is not necessary to give serial numbers of shotguns or rifles when applying for a 1940 resident hunter's license. This year the Commission is asking hunters to cooperate with State officials, in the interest of National Defense, by giving the number (quantity) of rifles and shotguns they personally own. A hunter need not give any record of borrowed guns; the actual owner of the guns should give that information if and when he purchases a hunter's license. President Ross L. Leffler of the Game Commission has issued a statement asserting that: "Refusal to give the information, for any reason, will not invalidate the right of a person lawfully entitled to secure a license, from procuring one in the usual manner."

* * *

CITY WORKER HUNTING WITHOUT LICENSE

Q. A man owns a tract of land on which he resides, has the greater portion under cultivation conducted by himself, but works in the city by day, cultivating his land after work. Does this man have to purchase a resident hunter's license? Is he required to make his entire living on this land before he may hunt without a license?

P.H.—Indiana, Pa.

A. The Game Law provides that any citizen of the United States actually residing upon and cultivating lands within this Commonwealth may hunt on same without a license, and, with the consent of the owners, upon all lands immediately adjacent and connected to his own, without a hunter's license. If the individual referred to makes a reasonable effort to cultivate the land on which he resides, we are of the opinion that he may hunt on same without a license, even though he is employed in a nearby city during the daytime. While the Game Law is usually construed to imply that the privilege of hunting without a license shall be extended only to persons engaged in farming as a means of gaining a livelihood, the law is not specific on this point, and the Commission is inclined to rule rather broadly on the subject.

HUNTER'S DOG ON POSTED LANDS

Q. Does a hunter have the right to send his dog on posted land to chase the game off to unposted land, and then kill the game?

M.L.S.—Milan, Pa.

A. The laws of the State are not specific on this point. However, a landowner has almost absolute jurisdiction over his own property, and in our judgment he has the right to regulate trespass by man, or by animals designated by law as personal property, which includes dogs. We therefore advise a dog-owner to refrain from sending his dog upon posted lands when he lacks permission of the landowner. There are provisions in the Dog Law under which property owners may kill dogs found on their lands, and it is always best to respect the wishes of landowners. This may eventually bring a change of heart and removal of his objections.

* * *

DAILY LIMIT ON RACCOONS IN 1940

Q. Suppose another licensed person and I went 'coon hunting; I drive my car, and the other hunter gets a raccoon. Now if I should get a raccoon later in the day or night and we carried both animals in my car, would that be within the law?

H.W.C.—Genesee, Pa.

A. Not this year. The 1940 daily limit on raccoons is **one to an individual or hunting party.** If two hunters are hunting together for raccoons, the two are entitled to only one a day; and after a hunter participates in taking one raccoon, he cannot under this year's ruling hunt raccoons any more that day, which by law is fixed from noon to noon for raccoon hunting. He could not continue to hunt alone that day and take a raccoon, after his companion had taken one.

* * *

GROUNDHOG FLESH FOR BAIT

Q Would it be legal to use "tainted" groundhog flesh for bait this coming trapping season, if the groundhog has been killed during the open season and put in jars to cure?

G.B.H.—Frenchville, Pa.

A. Yes. You will understand that the groundhog is now a game animal, and the law prohibits the possession of any game for a longer period than sixty days after the close of the season (except live raccoons under permit). As the groundhog season closed September 30th, it would be unlawful to use the flesh of these animals for bait after November 30, 1940. No poison or chemicals may be used for trapping.

BOY OF FIFTEEN HUNTING

Q. I am 15 years old, legally licensed to hunt. My father accompanies me when I go hunting. What is the maximum distance I am allowed to be away from him?

A. The law does not specify distance in such cases. It merely says that a boy your age, to use firearms for hunting wild birds or wild animals, must be "accompanied by an adult at least twenty-one years of age, unless such hunting is done on the premises whereon such person resides." In our judgment, you should stay within sight and sufficiently near to your father that he may at all times supervise your handling of the gun.

Q. May I (15 years old) cross a highway and hunt on my neighbor's land, if I have a license, without anyone accompanying me?

A.C.—Uniondale, Pa.

A No.

* * *

GUN RECORD ON CAMP ROSTER

Q. Is it legal to register one gun on your camp roster, and then use another gun for hunting, without changing the roster?

J.M.—R.D. 1, Verona, Pa.

A. No. The change should be made on both rosters, the one in possession of the captain and the other at headquarters, before proceeding to hunt.

* * *

CUTTING UP DEER AT CAMP

Q. Can a deer be cut up in camp for consumption by the members of the hunting party in camp? Can a deer be cut up in shares at camp before the hunting party breaks camp, the portions to be taken home?

W.McH.—Duryea, Pa.

A. The answer to both questions is "Yes". When a legally killed deer is cut up in camp for the purpose of consuming it there, the head properly tagged with the hunter's name, address, license number and location where killed, should be kept available for inspection by a State officer. When a deer legally killed is cut up in camp and distributed to the members to be taken home, each portion being transported must be identified with a card or marker bearing in plain English the name and address of the owner, his hunter's license number, and the contents of the package, if covered. As the "owner" in this case is not defined by law, the Commission has ruled that the above information should be shown jointly on the marker for both the hunter who killed the deer and the possessor of the portion.

WILDLIFE

THEN NOW

Then and Now

A free Game News subscription for one year, together with a copy of "Pennsylvania Bird Life," and "Pennsylvania Wildlife," will be given for each interesting, unusual or historical fact pertaining to Pennsylvania or American wildlife accepted for this column. Only boys and girls under 18 are eligible, and each historical contribution must be accompanied by satisfactory proof. Address all items to "Wildlife Then and Now," Pennsylvania Game Commission.

"Unusually large quantities of game could be had about market this morning. It is argued that the war rendered game plentiful, by withdrawing so many hunters from the chase, thus allowing deer, pheasants, partridges and other game a quiet, unmolested period, in which to breed and multiply. Persons the least bit tinctured with nimrodism can find any quantity of amusement in the northwestern counties of the State. Deer, bears, panthers and martens are said to be plentiful in Elk and Forest Counties." (Patriot and Union, Harrisburg, Jan. 3, 1867.)

"Deer are reported to be unusually numerous this year in all quarters. It is believed that many have come hitherward from the mountains of Tennessee and Virginia, on account of the disturbance of those regions by the contending armies. Three or four Lewistowners made a hunting excursion to Blair County a few weeks ago, and came home each, we believe, with one or two deer." (True Democrat, Lewistown, Dec. 7, 1864.)

A squirrel always knows exactly the right place to chew through a nut shell with the least amount of work, and he never bothers with an empty one. Proof: Outdoor Life, April Issue, 1940, Page 138, Gus Mager.—George Cessna.

"Crows have been on the predator list as early as 1789. Town records of Dover, Massachusetts, from that date until 1841 reveal that bounties ranged from 12 cents to 20 cents for each bird killed.

"I found this fact in the February, 1940 issue of "Hunting and Fishing" magazine. The editor of this magazine is John O. Emerson."—Harry B. Burger, 15 years old, Perkiomenville, Pa.

"Our black squirrel, which is still common in some places, isn't a distinct species. It is merely a color phase of the gray squirrel! Blacks and grays occur in the same litter, just as red and gray screech owls are found in the same brood. Taken from March, 1940 issue of "Outdoor Life" under the heading "Game Gimmicks" by Gus Mager, page 120."—Donald Boyce, (16 years), Erie, Pa.

"Ringneck Pheasant (Phasianus forquatus) first recorded U. S. importation of this magnificent game bird occurred in New Jersey over 100 years ago. These first birds came from England where it is supposed to have been introduced by the Romans and was a cross from the common pheasant of Asia Minor and the Chinese Pheasant. 1940 issue of "Hunting and Fishing", page 9, by Thomas E. Morrison."—John G. Brubacher, (17 years), Selinsgrove, Pa.

E. L. POOLE

I DON'T CARE IF YOU DO WANT TO GET AN EARLY START.... I'M NOT SHARING MY BED WITH A DOG AND GUN
SHELLS
GOODBYE, DEAR! DON'T FORGET TO WRITE!
BUT GOSH HONEY, WE'RE ONLY GOING ON A DAY'S HUNTING TRIP!
THE NEWLYWEDS
MY WIFE MADE ME WEAR A BULLET-PROOF VEST!
THAT'S NOTHING! YOU SHOULD SEE THE STRIPED SHORTS MY WIFE BOUGHT ME TO WEAR!
OUR DOGS SEEM TO KNOW EACH OTHER! HAVE WE MET BEFORE SOMEWHERE?
HE TRAINED HIS DOG HIMSELF!
HE SURE DID A SWELL JOB!
BUS STO
I HOPE THIS GUN IS BETTER THAN THE LAST TWO I HAD! THEY NEVER HIT WHAT I AIMED AT!
DID YOU EVER THINK OF USING A GUN THAT'S FIT TO SHOOT?
HOLY SMOKES! I BROUGHT MY MARRIAGE LICENSE INSTEAD OF MY HUNTING LICENSE-WHAT WILL I DO?
AW, WHAT'S THE DIFFERENCE: RABBITS CAN'T READ ANYWAY!
CARROLL

HE MENTIONED SOMETHING ABOUT COMING A HUNDRED MILES AND FORGETTING HIS SHELLS!
I CAN'T SEE WHAT HE'S BEEFING ABOUT! I FORGOT MY LIPSTIC!!!
I WONDER WHAT AILED THAT FARMER THAT HE CARRIED ON SO WHEN WE SHOT THESE "PHEASANTS".
THE WAY HE ACTED YOU'D THINK THEY BELONGED TO HIM INSTEAD OF HIS WIFE!
OF COURSE I KNOW IT'S NOT A RABBIT BUT IT'S THE ONLY WAY I CAN GET MY HUSBAND TO BUY ME A NEW OUTFIT!
C'MON, HURRY AND PRODUCE! YOU TRADED OUR DOG ON THAT STUFF, NOW LET'S SEE YOU YANK OUT SOME RABBITS!
HE'S SULKING JUST BECAUSE I MISSED A TEENY WEENY RABBIT AND SHOT HIS NASTY OLD DOG!
MAGIC MADE EASY
CARROLL

A few of the representatives who attended the Third Annual National Conference on Conservation Education and Publicity at Pigeon River State Forest, Michigan. Representatives from Pennsylvania included Wilbur M. Cramer, In Charge of Training for the Pennsylvania Game Commission; Myron Shoemaker, Pennsylvania Fish Commission; and Robert W. Steventon, Chairman of the Conseravtion Education Committee of the Penna. Federation of Sportsmen's Clubs.

LAND ACQUISITION

Since reported in the September 1940 issue of the Game News, the Commonwealth has secured title to 12 tracts of land totalling 2,440.4 acres, distributed through nine counties of the State. All but two of the tracts were additions to existing blocks of State Game Lands. The two tracts are in Susquehanna County, connecting one another, and forming a new project now designated State Game-Lands Number 175.

The recent acquisitions are as follows:

County	Grantor	Acreage	State Game Lands No.
Beaver,	Beaver Trust Co. and Sarah Ferguson	346.4	173
Bedford,	Sarah Hall	112.5	49
Cambria,	County Commissioners	96.9	158
Juniata,	Seidel & Leonard	33.9	171
Somerset,	County Trust Co.	189.9	111
Sullivan,	Wm. Temple	402.9	13
Susquehanna,	Harriett Ayres, et al	287.5	175
Susquehanna,	Delaware, Lackawana & Western R.R.	448.7	175
Susquehanna,	Anna V. Sturek	83.8	35
Venango,	Charles A. Ablett	37.8	45
Warren,	Minnie C. Lindblade	130.0	143
Warren,	Minnie C. Lindblade	270.1	143
	Total	2,440.4	

With the acquisition of title to the above mentioned tracts, the aggregate area of State Game Lands became 641,682 acres. In addition to this almost 50,000 acres are under contract for purchase.

"The young grouse use our cuttings at Game Lands continuously for cover. I counted 17 in one flock and 11 in another within 75 yards of each other."—Game Protector Roland Turley, Bedford County.

NEW LEAFLETS

The Game Commission announces the publication in rather liberal quantities of a new leaflet dealing with bird life. It is titled "Attracting Birds" and contains suggestions for building bird houses and bird baths, foods for birds, improving environment, etc. Copies may be secured, free of charge, direct from the Commission's office at Harrisburg. When requesting the publication please refer to it as Educational Pamphlet, No. 1, "Attracting Birds."

Another leaflet entitled, "A Conservation Program for Women's Organizations," is also available in liberal quantities and both Women's and Garden Clubs are encouraged to write in for this instructive pamphlet. It can also be used by other interested conservation groups especially school teachers who are desirous of promoting conservation in the schools but who do not know what types of programs are practicable or applicable in and out of the class room.

VOCAL VARIETIES

Muskrats are generally supposed to be silent animals, but this is not the case. The young are quite vociferous and captive animals occasionally display vocal prowess. They often make a chattering noise with the teeth, sometimes a threatening sound or sign of anger and, on other occasions, a squeaking sound—produced by rubbing the molars together in sharpening and cleaning them—or in chewing. But, these are not vocal sounds. —From the National Wildlife Federation.

VENISON ADVOCATED FOR BRITISH TABLES

Deer Controller Explains Its Value to the Public.

Editor's Note: If deer in Pennsylvania become more abundant who knows but what the office of a deer controller for Pennsylvania would be a good thing.

The pros and cons of making the unusually large stocks of venison—now running on the hoof—available for consumption in Britian are set forth by the Deer Controller for Scotland, Frank Wallace, in The Field of London, as follows:

"During the latter part of 1939 the Deer Control Officer received letters from all parts of the country asking where supplies of venison could be obtained. Out of some 500 stags which were sent to Glasgow last Autumn, over seventy were condemned as unfit for human food. This result was due in some cases to delay on the railways and the difficulty of getting stags from the larder to the rail head. In others it was due to lack of proper cleaning of the deer before dispatch.

"Approximately 18,000 deer were killed in Scotland between August, 1939, and February, 1940. There is no reason why, if necessary, a similar number should not be killed before next February, A large number of deer must be killed in order to prevent damage, apart from the question of their value as food. One thousand tons of venison is not negligible from any aspect, and should not be allowed to go to waste."

The following extract from a letter gives the views of a prominent dealer as regards the cleaning of deer:

"The general objection to venison as a food, in my opinion, is due to the difficulty of getting the deer properly handled at the time of shooting. The fact that a carcass may be shot in the forenoon and not cleaned until the evening does not improve the keeping qualities."

It is suggested that each deer forest owner should be asked to register with the most convenient depot and undertake to dispose of his venison through that depot. On registering, the owner would be asked to state the approximate amount of venison which he would have available for sale. It is appreciated that owners may require to retain some of their venison for private use or for local distribution, but it is hoped that they could undertake to dispose of 75 per cent of their venison through the selected centers.

There is no doubt that the public is at last beginning to appreciate the merit of venison as food. Mr. Wallace thinks it should be sold as venison instead of being disguised as mutton or beef, as has hitherto been too often the case.—N. Y. Times.

CURRENT TOPICS

GAME PROTECTOR FETED

Forty representatives of sportsmen's associations in Somerset County recently attended a testimonial dinner for Game Protector John Spencer, at which time high tribute was paid to Mr. Spencer's work in the county. As a token of their appreciation for his services, his admiring friends presented him with a pair of high-powered binoculars. The presentation speech was made by Joe Critchfield, popular sportsman from Confluence.

Speakers and guests included: Rollin Heffelfinger, Field Division Supervisor, Division "G"; Fred P. Hare, Jr., toastmaster; Sergeant J. A. Blair, Pennsylvania State Motor Police; Theodore Mills, Game Protector; William Matthews, Game Protector; Millard Crooks, Game Protector; William Reckner, President of the Salisbury Sportsmen's Association; George Sura, Secretary, Central City Sportsmen; Lee Imler, Meyersdale Sportsmen; and William Blansett, President of the Stoyestown Sportsmen.

All of the club representatives present stated they received excellent cooperation from the popular officer and wished him the best of success in his transfer to Schuylkill County. In writing concerning the affair, Emory L. Fulton, President of the Somerset County Sportsmen's League, stated, "Mr. Spencer has a host of friends throughout the county and the sportsmen and landowners of this district are sorry to see him leave."

THE LIFE OF A GAME WARDEN

If the game warden asks to see your license, he's insulting.

If he takes your word for having one, he's corrupt.

If he arrests a violator, he's showing how tough he can be.

If he gives the culprit another chance, he's showing favoritism.

If he tells of his arrests, he's a gossiper.

If he labors day and night to enforce the law, he's a tyrant.

If he relaxes at all, he's a shirker and crook.

If he talks fish and game conservation, he's maudlin.

If he keeps quiet, he's not interested in his work.

If he accepts suggestions and advice, he's incompetent.

If he works out problems for himself, he's a know-all.

If he acts like a gentleman, he's too easy.

If he acts firm, he's unfair and a rascal.

—North Dakota Outdoors.

CALLED TO SERVICE

District Game Protector Philip H. Melching, of Lebanon County, who has been an active member, and a Lieutenant in the Pennsylvania National Guard, has been called for a year's service in the United States Army. His present headquarters are Battery "H", 213th C.A.A.A., Virginia Beach, Virginia. The Commission's employees have always done their share in a national emergency, and the present situation will undoubtedly find them willing to respond to any emergency.

JOHN "DAD" BECK, PAINTER OF WILDLIFE

Editor's Note: This acknowledgment is no discrimination against any of the other nationally known artists whose covers have appeared on GAME NEWS. *It is intended only to acquaint our readers with a character who, by the very virtue of his modesty, has been content to pursue his hobby, a non-competitive one, simply because it gives him the pleasure he so richly deserves.*

We are fortunate in being able to present to our readers the unusually fine picture by John Beck appearing on our cover this month.

John Beck was born in Harrisburg just after the Civil War, the son of a well-known Pennsylvania artist of that period, and one of four brothers, all of whom followed painting as a profession. He early developed a talent for drawing and painting, and his love for birds, beasts and fishes soon showed itself in his boyish attempts to depict them as his favorite subjects.

His penchant for the denizens of streams and forests never left him, and for more than six decades he has given great pleasure to his admirers by his art and craftsmanship in that field, for Mr. Beck is not only an artist but a sculptor and a proficient taxidermist. He is the father of the late J. Augustus Beck, the well known taxidermist, and assisted his son in mounting the superb collection of migrtory specimens in the Pennsylvania State Game Refuge Museum at Pymatuning.

That he is not entirely a "this-one-thing-I-do" artist is shown on the walls of his studio, a mountain retreat on the Loyalsock Creek, which are covered with his works—flower, landscape and figure subjects; but his best work is the portrayal of wildlife.

"He prayeth best" can in his case be paraphrased into "he painteth best, who loveth best, all things both great and small." Perhaps an oil of a bald eagle appears on his easel today, and a water color of a Ruby-crowned Kinglet tomorrow. Or, if the urge is toward fish one is reminded of the southern preacher who said: "And in dat net was all kinds of fishes, from de mermaid to de mulligrug," as he waxed eloquent in his sermon on the "Miraculous Draught of Fishes."

Almost any able artist can group and depict dead game for "still-life." Painting is a mere matter of skillful imitation, but it is reserved for the few and the elect to catch and portray bird-life in action.

Birds and animals awake and animated; on the wing; on the alert; "en-garde toi" before combat; on proud parade strutting before the mate; full-throated songsters singing the epithalamium during the nesting season, et cetera. All this Mr. Beck's knowledge and "gun-shot" eye seizes and accounts for the excellent results obtained.

Some of his studies of game birds for detail, natural attitudes and color would make the shade of Audubon himself sit up and take notice. Among them, as a frieze on his studio wall, are a flight of bobwhites and "stills" of ruffed grouse, ringneck pheasants, Hungarian partridges, woodcock and other game birds all done from life.

Affectionately called "Dad," he is known by a host of hunters and fishermen all over the state.

One of the many food plots planted on State Game Lands.

CURRENT TOPICS

The bird in the photograph above, a Gambel's Sparrow, is a very interesting record for Pennsylvania. It was trapped at a banding station belonging to Barton L. Sharp, Lititz, on April 16, by Guy Bomberger.

NOTES FROM THE FIELD

"On Friday evening, August 30, 1940, while working on Game Lands No. 97, near the Black Valley church, I noticed large numbers of nighthawks flying about; evidently they were migrating. The peculiar thing was that the birds were flying northward. At any time, at least 50 birds could be seen darting about, all flying in a northerly direction. A few nights later any number of birds could be seen flying around but they seemed to be heading nowhere in particular.

"At present the deer in the southwestern section of Bedford County, in vicinity of Game Lands Nos. 48 and 104, are destroying large amounts of buckwheat, and we are receiving more deer damage complaints than we received at any time in the past. Ten years ago deer were quite scarce in that section but in recent years have multiplied quite rapidly, probably due to the rugged territory and a limited number of hunters. In other sections of Bedford County, where very little buckwheat is grown, we have received but a very few complaints.

"Acorns, hickory nuts and black gum berries are very scarce in lower Bedford County this year; also grapes, dogwood and thornapples are on the missing list. I have not noticed a single dogwood berry this summer and have seen but one or two bunches of grapes and thorn apples. Huckleberries were also very scarce."—Albert R. Bachman, Game Protector, Bedford County.

"C. J. Barton, 82 years old, who conducts a general store in Hustontown, killed a mink which had a rabbit by a hind leg. When Mr. Barton shot the mink the rabbit scampered away uninjured."—Game Protector William Lane, Fulton County.

"On Monday, September 16 while returning from Refuge No. 530 on Negro Mountain I stopped along the road to listen for illegal shooting. A gray squirrel was playing near the car, and when it ran out into the field I whistled like a hawk to scare it. Unknowingly I called a Cooper's hawk out of the woods. He settled in a large maple tree about 200 feet from the car. Finally the squirrel got into a position midway between the hawk and the auto. Mr. Hawk started for him. It was a close race, but the squirrel made the tree first and got around safely except for about 2 inches of its tail which the hawk tore off. By that time I had loaded my shotgun and ended the game with the hawk the loser."—Nicholas Ruha, Game Protector, Somerset County.

"The crop of a six week old male ringneck pheasant, found in Lower Paxton Township in Dauphin County on September 18 contained 45 Japanese beetles. In addition it had 19 grasshoppers, 19 snout beetles, 3 ground beetles, 2 stink bugs, 14 kernels of wheat, 2 seeds of foxtail grass and 7 seeds of squirreltail grass. This bird certainly repaid the farmer, on whose lands it was found, for the few kernels of wheat it had consumed."—Robert D. McDowell, Game Research Assistant.

"While working on State Game Lands No. 145 Mr. Howland and I killed two large watersnakes. We opened the snakes, and one had 33 young and the other 36 inside. The young ranged in size from 5 to 7 inches."—Raymond Holtzapple, Game Protector, Lebanon County.

"While driving through Game Lands No. 159 I saw a hawk along the road trying to fly. It appeared to me the hawk was caught in some weeds. I stopped and went back, but it had already freed itself and had gone. Upon looking around I found a partly consumed watersnake which the hawk attempted to fly away with."—Joseph L. Budd, Game Protector, Wayne County.

"On September 1, I walked the eight miles around Refuge No. 507. On the farside I sat down on a ledge of rocks to rest. In a few minutes I heard two deer snort and saw them jump across the refuge line. Almost simultaneously I heard the brush cracking down over the bank and a large black bear walked out and came toward me. When he was within about 25 yards of where I sat I thought he was close enough and looked around for a good tree to climb. Then I hollered, and Mr. Bear stood up, gave a snort and in three jumps was out of sight."—Chester S. Siegel, Game Protector, Lycoming County.

Pennsylvania has been allocated the sum of $119,218.65 as her share of an appropriation of $2,500,000 made possible under the Pittman-Robertson Federal-Aid-in-Wildlife Act for the Federal fiscal year ending June 30, 1941.

"This month I saw a blacksnake kill a copperhead on Refuge No. 56."—Game Protector S. Earl Carpenter, Bucks County.

"On August 30, in company with Fish Warden Womlesdorf, of Luzerne County, I was visiting a small pond in the lower end of the county which is well stocked with catfish and sunfish. We were amusing ourselves by throwing part of our lunch to the fish and watching the scramble as they ate the bread. As we were feeding the fish we noticed a cat watching the operation very intently. A small piece of bread fell in the water quite close to the shore, and with a lightning thrust pussy caught herself a nice sunfish as it came up for the bread. Having eaten the fish in short order, she came back to us and waited for more bread to be thrown in the pond so that she could continue her fishing operations. I thought afterwards that a small rabbit would have a slim chance with that cat."—Game Protector Samuel K. Weigel, Luzerne County.

"On August 30, a fox trapper of Crosby called me on the phone and advised me that there was a cub bear in one of his fox traps. The old mother bear was there also and would not let him get near the cub; she did not seem to be afraid of him and was making a noise like she was crying. I took my rifle along with the thought of shooting the trap off its foot. Upon my arrival I found that they had broken the toggle and had gone. I followed the trail for a mile or so and finally lost it after they had got out in the heavy timber."—Game Protector William J. Carpenter, McKean County.

CURRENT TOPICS

"Robin—On July 4, 1939, I discovered a robin caught in a neighbor's garden. It was caught in a wire put up for peas to grow on. When I went to release it I found it was banded, so I sent the bird into Washington. When I got an answer I was told that the robin was banded in the same place five years before, and in the same month in which I found it."—Donald Gomer, Lititz, Pa.

A battle between a doe deer, seeking to protect her young fawn, and a coyote, was witnessed by a cowboy on the McAllen ranch in northern Hidalgo County recently, it is reported to the Game Department by Mr. Argyle Allen, owner of the ranch. The cowhand came upon the doe and coyote while the battle for the life of the fawn was in progress. Every time the coyote made a rush for the young deer, the doe struck out sharply with its hoofs and the fur flew from the coyote. The battle was interrupted when the cowboy made his presence known. The coyote ran into the brush, but the doe and her fawn took their time about leaving the scene of the skirmish. The doe was bleeding slightly.—From Texas Game, Fish and Oyster Commission.

The most prolific pair of mourning doves yet reported in Texas raised six pair of young in a rose arbor in the yard of H. A. Stuermer of Cuero last year and at the last report had raised three pair this year and were on the job with a fourth, according to a report from the Cuero Standard.

The ducks at the Pymatuning Refuge have earned a new trick. It is told that a flock of mallards have discovered that the tin cans and boxes along the shore often contain delicate morsels like worms, crabs, minnows, etc. They are now making regular rounds of the fishing section, turning over cans and buckets and probing the contents for fish bait. The only way fishermen can keep their bait from the ducks is to hide it securely. Smart birds, those Pymatuning ducks.

"John Ziegler, Forest Ranger in Perry and Juniata Counties reported to me that he witnessed a hawk, species unknown, and a very large rattlesnake having a battle to the end. When he first noticed the hawk jumping up and down he thought perhaps it was caught in a trap, but upon closer examination he found a battle going on with a large rattler. The hawk left Mr. Ziegler get quite close before it flew away. Upon examining the rattler he found the hawk had eaten the snake's head, and began eating its stomach. About six or seven inches of the snake's stomach had been eaten away, but the reptile was still alive. Mr. Ziegler finished the battle by shooting the rattler."—Harold E. Russell, Game Protector, Perry County.

"Five deer were killed by cars over the Labor Day holidays." — Game Protector George L. Norris, Warren County.

On August 30 a bluebird bearing band marked (38) 244650 of the Biological Survey was picked up by Mr. C. W. Hartzell, 2551 Agate Street, Harrisburg, Pa. Mr. Hartzell took it to the Harrisburg Zoo where it was identified by Richard Rauch, the Director, and subsequently released unharmed.

"I picked up the Philadelphia Record this morning and saw the decision of the Commission in regards to the open deer season. This has been my plan for some years back, and I believe it will prove more successful than any other you could have adopted. You have my wholehearted cooperation, and I shall sing your wise decision from the housetops."—Mark Bream, Gettysburg, Pa.

Note: The Game News appreciates this cooperative letter from Mr. Bream, because he was one of those who strenuously opposed the season for does only in 1938.

"Saw two large racked bucks together in a corn field near Sardis, on July 6. Both were in excellent condition. Saw two ringneck hens with a total of 21 young birds on the 18th and 19th.

"A farmer, J. B. Oberleiter of Allegheny Township, reports that while working for a gas company recently he saw a male pheasant jumping up and down in a field and upon investigating the reason, found it had killed a 4½ ft. blacksnake."—Anthony J. Zaycosky, Westmoreland County.

"Fawn crop according to the number showing up is above normal. I am seeing more this spring than in former years, notwithstanding the heavy kills of the past two years. Rattlesnakes are conspicuous by their absence so far this season and hope it continues. I believe owing to the wet season they are not doing much traveling."—Game Protector John A. Hopkins, Warren County.

"I have had a number of reports during the past month of bear being seen by fishermen and motorists. Most reports are of old bears with one or two cubs with them"—W. J. Grion, Clinton County.

"One of our Farm Game Protectors on Project 73 in Erie County had the occasion this month to witness the actual killing of a half grown rabbit by a crow. While sitting on his back porch he noticed this crow out in back of his barn working on something and after investigating he found a half-grown rabbit all but dead and the crow had it almost skinned out. The rabbit was still alive when he found it. The crow came back shortly and he shot it with a .22 rifle."—John G. Kennedy, Erie County.

"Upon checking over the game food in this section, I find that there will not be a very good crop of fruits and berries. In the crabapple thickets there are very few trees that have any apples at all. The hawthorn and viburnum are the same."—Game Protector George E. Sprankle, Fayette County.

"Despite adverse weather conditions which made it impossible to hire teams or tractors to plow food plots and crop land, we finally succeeded in getting in all the food plots we had last year besides getting in plots on new lands. Besides 50 acres of food plots we have 37 acres corn, 10 acres soybeans and 10 acres buckwheat besides approximately 75 acres of sharecrops which should give us a good supply of feed for this winter."—Game Protector Fuller H. Coffin, Erie and Crawford Counties.

"The outlook for small game is the best in this section since 1935. Looks now as though we are going to have a crop of beechnuts this year and will be quite a few apples scattered throughout the game lands."—Game Protector Cecil D. Hancock, McKean County.

Above are applicants who recently took the examination for taxidermy licenses. Under the Game Law all taxidermists must pass a rigid examination by an Examining Board appointed by the Game Commission. Top row—left to right: George Bills, Jr., Hastings; John A. Hebel, Sr., Monongahela; John H. Shucy, Myerstown; Michael J. Kelly, Member, Scranton; F. C. Schmid, Member, Philadelphia; Reinhold L. Fricke, Member, Pittsburgh; Allan M. Millhouse, Lancaster; Frank Bauder, DuBoistown. Bottom row—left to right: Louis Calvetti, Clune; H. W. Brown, Springdale; Thomas F. Malloy, Luthersburg; Charles F. Ness, York New Salem; Ralph N. Kurtz, Pittsburgh; Ivan M. Loose, Denver; Henry A. Welsh, Erie.

AN ANALYSIS OF METHODS USED TO

All hunters in Pennsylvania must report their game-kill.

Comments of Reporting Officials

Among the comments submitted by reporting officials, or summations of information supplied, the following will be of interest:

CALIFORNIA: In an article by J. S. Hunter and Donald H. Fry, Jr., prepared for "California Fish and Game", the authors report that California beginning with 1935 supplied, as part of the application for licenses, a space in which to report the game killed. They found "The license application system has two major disadvantages: it is very slow, and it will not give total kill figures that we can assume are even approximately correct. It will be 1941 before it will be possible even to start working on the 1939 reports. A related disadvantage is that there are men who hunted last season who for some reason will not buy a license this season. Most hunting licenses are sold by sporting goods stores. A hunter rushes in to buy his license and shells. He has been thinking about other things, and is somewhat confused by the rather detailed questionnaire. The customer is in a hurry, and knows the clerk wants to wait on the other men who have just come in. The result is that ONLY ONE-FOURTH of the hunters record a kill, and many of those are too hurried to do a good job. At the end of 1938 a special questionnaire was sent to one out of every ten hunters who had purchased a license. The hunter received this special questionnaire at the close of the season, and he was not hurried in filling it out. Of the hunters who received the special questionnaire, 26% reported their kill and another 3% reported they had made no kill. The special questionnaire makes it possible to compile the records a year sooner, and to make a MINIMUM ESTIMATE of the probable total kill throughout the State."

CONNECTICUT: Its sampling experiment in the tabulation of game-kill reports (tabulating every fifth stub with 25 kinds of game listed on the back thereof) produced a result so close to the complete tabulation of all reports received that the difference was negligible. During the year of the sampling test that state issued only 28,000 licenses, and the cost of hand tabulation by either method was not burdensome.

ILLINOIS: This state started its present statistics in 1937. The return of completed application with kill data for the previous year was negligible, and tabulation not attempted. As to the past two seasons, (1939 figures given above) Mr. Maloney, Chief Clerk, comments: "These figures are received too long after the actual kill has occurred. We are about two years behind in our tabulation."

NEW JERSEY: Captain H. J. Burlington, the Executive Secretary of the New Jersey Commission, states: "Twenty-five percent of the applicants for new licenses have not had a license previously, and we do not get the information until the year after the application for a new license is made."

NEW MEXICO: Elliott Barker, State Game Warden, comments: "While our regulations require a statement of game and fish of all kinds taken during the preceding year by applicant for his next license, we have found these of little value and for the past two years have not tabulated the results. So many hunters are new each year, and so many who hunted the previous year drop out for one reason or another and do not regularly apply for license."

OHIO: Dr. Lawrence E. Hicks, in Charge of Ohio's Wildlife Research Station, holds "A 5% to 8% sample is entirely adequate if it is a scientifically selected cross-section."

OREGON: Frank B. Wire, State Game Supervisor, reports a very accurate check is obtained on the big game kill because the hunters are required to check in and out at specified points. With reference to the small game tabulations, he comments: "We are not satisfied with our present method of collecting reports from hunters when they purchase their licenses. We do not feel that it is particularly satisfactory in view of the long period of time that elapses before final figures are available. Many times forms are signed without careful attention being given as to figures furnished; often a license purchaser has forgotten the amount of his previous year's take."

WASHINGTON: B. T. McCauley, Director of the Department of Game, reports: "With so many license holders (219,000, with 43% reporting last year) we can not get a very clear picture of the game situation through a compulsory card return system. We are setting up checking stations and area counts on upland game birds in conjunction with survival studies which will give us a very good picture. I frankly feel that the check area plan with a census each year is of more value than a general card return."

MANITOBA: Director Cunningham says: "I consider returns showing the number and kind of game birds and animals taken during the open season very important. The returns submitted by the licensed hunters are well worth while for statistical purposes. We have considerable difficulty getting complete returns. Prior to the opening of the season a delinquent list is sent to all license vendors. Anyone whose name appears on this list when applying for a license has to fill in a form enumerating what game he took during the previous season."

Pennsylvania's Early Methods Inadequate

Pennsylvania's methods are not at all unique, but the experience gained in this endeavor may be helpful to others. We started to collect what we thought were fairly accurate statewide field estimates beginning with 1915. Members of this Association have at times questioned the figures so obtained. Some of you plainly inferred the Pennsylvania Commission must be doing liberal guessing to make a good showing. Recent developments indicate that our figures for many years were not simply wild estimates, but that in the main were actually too low. In the past three years we have found that our field officers' estimates invariably run anywhere from 25% to 30% below the figures later secured by tabulating individual reports from our license holders.

We inaugurated our individual report system twenty years ago, when hunters were asked to voluntarily file a report of their bag. The blank supplied with the licenses of that period was separate and not attached to the license. It frequently became lost long before the end of the season, and it required an envelope and first-class postage. As President Leffler of our Commission reported at this same meeting in Toronto ten years ago, some years we obtained reports from as many as 40% of the licensed hunters. While such reports were very helpful, the voluntary system did not prove satisfactory for various reasons.

When it was found that hunters generally were careless about submitting reports, the Commission considered the advisability of obtaining a report when applications were made for licenses for the ensuing year. That was discarded because upon inquiry we learned from other states that such a system is beset with the difficulties already enumerated.

In 1923 when the game law was re-codified a provision was inserted to require the filing of game-kill reports within 30 days after the expiration of the license (then April 30). Unfortunately, through an oversight, the penalty for failure to comply was made the same as for hunting without a license; namely, $20.00. This new requirement was widely publicized, and in the beginning, as Mr. Leffler's report indicated, we got up to about 40%. Since the penalty was considered exorbitant, this provision of the law was not enforced. Hunters very soon became careless, and the number of reports dwindled to an appallingly low percentage. Those reports, however, did have some value for comparison of sample-lot tabulations with the estimates of field officers. During the past three years we have learned that such sample-lot estimates, based on reports received immediately after the close of the season, may not safely be used as the basis for estimating the total kill **because those who submit their reports early are always the more successful hunters;** also that those who have been less successful are not likely to send in reports at all unless actually required to do so.

In 1936, in a final attempt to test the volunteer system, we changed the form of our license and attached a special self-addressed business reply card to the license. All the hunter had to do was to fill in the game killed and drop it into the mail box. Under that system with more than 540,000 licensed hunters, we received only 80,000 reports, less than 15%. While that was more than double the number received in any recent previous year, the percentage was considered entirely inadequate.

Present System Launched in 1937

Our next step came in 1937, when the game laws were again completely recodified. We laid the problem before the directors of our organized sportsmen, with a suggestion that we either modify the penalty and then enforce it, or that the requirement be entirely eliminated and the annual inventory of the game killed discontinued.

COLLECT GAME-KILL REPORTS

It had also been found that far too many non-residents were cheating the Game Fund by securing resident licenses at $2.00 instead of $15.00; that unnaturalized foreign-born residents, who are not eligible to hunt at all, were obtaining licenses; and that among those entitled to licenses there had been considerable cheating, such as giving fictitious addresses to avoid detection.

It was the consensus of opinion of the conference that such reports are essential in any game management program. It was further agreed that the penalty be reduced from $20.00 to $2.00 (the cost of our resident license), then insist that every hunter submit his report direct to the Commission as required or suffer the consequences. Penalty reductions are usually popular, and the Legislature promptly changed the law as suggested.

Our licenses are issued by about 800 agents, and we could not depend upon them to collect reports from all license applicants any more than can any other state or province depend upon its numerous license agents. Even though we could, the same drawbacks would apply as those already enumerated, and the reports secured would be of little value.

Beginning with 1937, our report blank, an integral part of the licenses as issued, was simply a self-addressed mailing card requiring 1c postage. In addition to calling the license holder's attention to the fact that the report was due by January 15, and that failure to submit it would cost $2.00, we also used the public press and the aid of sportsmen's organizations to call attention to the requirement.

The problem was tackled in an educational but firm manner, and the results obtained were excellent. For the year 1937 we promptly received reports from 69% of the 606,618 licensees without any reminder notices. A double mailing card was then used to notify those who had not responded, and a grand total of 93% of all license holders submitted their reports without prosecution.

For the year 1938, with 661,730 licenses issued, we received 80% of the reports promptly as required. After the balance had been notified of their delinqency, the total reached 96%. In the enforcement program which followed, we picked up a few more, bringing the grand total for that year to 98%.

For the year 1939, out of 660,360 licenses issued, we received reports from 89½% promptly after the close of our hunting season. A reminder was again sent to the tardy hunters. This quickly brought our total up to 97½%, and with the final check-up now being completed indications are reports will be received from at least **98½% of all licensees.** The missing reports cover those who moved out of the state, moved without leaving a forwarding address, who are deceased, etc.

Simple Forms Essential to Success

In approaching this work, we found it necessary to furnish hunters with **the simplest possible blank to avoid confusion and encourage filing. A complicated blank means less reports filed voluntarily.** We eliminated unimportant species, and did not ask waterfowl hunters to sub-divide their kill by species except to indicate whether ducks or geese. Neither have we requested them to give the county where their game was bagged because of the average hunter's uncertainty as to county lines, and the excessive tabulating costs involved should we try to break our tabulations down by counties. Since we have both bear and deer hunting, we found it necessary to separate the spaces in which to report such animals as widely as possible in order to avoid having hunters erroneously indicate they had killed a bear when in reality they had only killed a deer.

In Pennsylvania all license issuing agents submit reports regularly giving the license number and name and address of every person to whom a license is issued. These become our base list against which to check quickly on violation complaints, most of which come to us by license tag number only, also delinquent kill reports. We have found that the most expeditious way to tabulate these reports is by the same methods large business concerns use in collecting statistics; namely, punch cards and tabulating machines. These machines, as most of you know, do uncanny things. Among others, when the punched cards are properly sorted, a complete numerical sequence listing is furnished by a machine which indicates the number of every report that is in the heap, also what numbers are missing, so that the follow up problem reduces itself to the simple process of checking the missing numbers against the lists of licenses issued.

When the tabulation work is completed, those who have failed to comply with the requirements of the law are given an opportunity to acknowledge their neglect and send us the $2.00 penalty within ten days. Failing to respond, officers in the field are then supplied with carded lists by communities of those who are to be interviewed and the fine collected.

By this simple clerical procedure a large percentage of the delinquents pay their $2.00. The check up by field officers tends to impress upon all hunters the importance of the reports. As already indicated, within a three year period we have made an average annual gain of almost 10% in the number of reports submitted promptly after the close of the season, thus reducing by a like percentage the clerical work necessary to administer the plan.

Cheating Reduced to Minimum

After three years, we find that our lists of licenses issued are now comparatively free of cheating. It is a rare thing to apprehend a non-resident with a resident license, or an alien with a license to which he is not entitled, and the practice of giving false addresses to avoid apprehension has disappeared.

With the license tag on the back of every Pennsylvania hunter, and the list of licenses issued available in the offices of the Commission, field officers are now enabled to apprehend quickly those who commit depredations on our farms or violate the game laws.

Some of you have wondered whether these reports submitted by individual hunters are fairly accurate. Our experience indicates that **by obtaining the reports promptly after the close of the season they are quite accurate throughout**, and that errors made offset each other and balance out. If the filing of said reports were delayed for some months, we would have the same difficulties as reported by California and other states. While a few of our hunters naturally do some day dreaming and submit reports indicating maximum kills, as in every other state and province we have a few who understate their success. They also balance each other out.

Pennsylvania hunters on the whole are rather successful, but during an average year approximately 15% of our hunters kill no game at all. Some of them were unable to take time off, others became ill and couldn't hunt, while many others either were not experienced enough to find and bag game or were just not lucky. Our observations, as already stated, is that the hunters who are less successful are always among the last to submit their reports. Without a complete tabulation our figures would naturally be inaccurate.

Pennsylvania's law at the present time does not require those who killed no game to make a report, therefore no penalty. This is a mistake. Everyone should file regardless of the hunting luck. However, by our methods of checking up, these reports are required and obtained in order to clear the records.

The cost of this entire operation to the Pennsylvania Game Commission (extra temporary clerks, tabulating, postage, etc.) runs from one-half to three-fourths of a cent per dollar of departmental expenditure, which after all is a comparatively small amount to spend for the numerous benefits obtained. I might mention here that one of the important advantages of this system from the standpoint of income is that no careless agent can issue licenses and then claim they were stolen or destroyed by some accident. When the hunters send their reports direct to the Commission licenses issued very quickly show up in the list, and the auditors have no difficulty whatever in collecting funds due.

The writer is of the opinion that a 10% random sample, as some recommend, is inadequate, and that any figure based on such a sample is likely to be out of line. There is a possibility, however, that a system of cross-section sampling, or a plan such as that used by Connecticut, could be devised and used safely to obtain the desired statistics. In order to do this it would be necessary either to delay the tabulation for months as

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WHAT CAUSES HUNTING ACCIDENTS?

Continued from Page 7

Never lean on your gun.

(e) Position of the hunter, who carelessly crawls between the trunks of two trees, improperly dressed for his own preservation, being mistaken for game; and the case of the negro sitting in an alfalfa field hunting woodchucks, calmly bobbing his head up and down while he ate a noon meal of crackers and sardines and was shot in the shoulders and neck in mistake for a woodchuck; or the forty-five year old farmer while hunting woodchucks, placed himself along an old fence row surrounded by woodchuck holes, and then quietly took a nap. Scarcely a moment after he arose on his left elbow he was shot in mistake for game. It is highly important to note that the victims who were fatally injured in Pennsylvania, while hunting woodchucks in 1939, **directly and unmistakenly contributed to their own deaths, because of positions they had assumed and the clothing worn.**

Permit me, if you will please, to draw on my personal experiences while acting as the Referee in more than one hundred fifty hunting accident cases to determine if carelessness and negligence was involved. The actual names of the participants have purposely been deleted to save them further embarrassment, humiliation and grief.

Two lads, sixteen and seventeen years of age respectively, were hunting rabbits. The rabbit jumped up between the youths but neither saw it in time to shoot. The animal took refuge under an old wooden platform. One of the youths took a stick and tried to poke it out When this brought no results, he suggested that his companion raise the one end of the platform, while he watched from the other end. This was accomplished. The other hunter spied the rabbit and he promptly shot at it. When the smoke had cleared away it was found that the rabbit had been missed but that the companion had been seriously wounded in the leg and foot.

Two hunting companions, one with eight years' experience, the other fifteen, became involved in an accident. The offender, 39 years of age, had killed a rabbit and went to pick it up. As he straightened up his gun was discharged in some manner unknown to him. The firearm was examined at the hearing and found to be in good mechanical condition. His testimony revealed that he was hunting with both hammers fully cocked, and apparently had forgotten to release the second one before picking up the rabbit. His close friend, the victim, testified that he was fifteen feet away when the gun was discharged and the entire load had entered beneath the left arm pit. More amazing, he testified that the physicians were fearful of attempting to remove the wad which was still imbeded in his body, as his lung had collapsed. Confined to the hospital for eight weeks, he still faced two or three months in bed at his home. His bills at the time of the hearing amounted to more than $350.00, with more to follow, to cover the X-Ray pictures and blood transfusions. The offender gave him $15.00 to apply on the bills.

In one of the most outstanding cases coming to my attention, a 19 year old hunter, with three years previous experience, was involved as the offender in two accidents on the same day, both occurring within a half mile of each other. About nine thirty in the morning he shot a member of his hunting party in the leg, head, chest and arm at a distance estimated to be twenty feet. The victim had twenty-four years of hunting experience. A rabbit had been jumped, ran in zigzag course and was shot by the offender, who also thoroughly sprayed his friend with number 6's.

After removing the victim to the hospital the members of the party continued to hunt in the afternoon. Shortly after noon another accident occurred. The offender, who had shot a distant relative, testified:

Q. "I would like to have you describe, as clearly and concisely as possible, the conditions of the accident."

A. "I was standing kind of out across from him and he was standing back of some briars, and he shot at the rabbit and I didn't take notice I thought he was down farther or across, and I shot, and when I shot he hollered and said, 'You hit me in the leg,' and I went right to him."

The second victim was also taken to the hospital.

Standing five feet two inches in height and supported by a crutch, in another case an intelligent fourteen year old lad calmly took the witness stand and related how he had been injured. Here is his testimony.

"My father and I were out hunting and we came to three lumber piles along the edge of a field. We had two dogs with us and they were on the lumber piles barking. I got up on a stump and father was down farther. The dogs chased the rabbit out and I shot. *** He picked the rabbit up and hit it over the head, and his gun went off."

Q. "How far away were you?"

A. "I was about eight feet away."

Q. "And as a result of the accident you have suffered the loss of your right foot, just above the ankle."

A. "Yes.'

The father testified under extreme difficulty.

In another case a farmer shot his daughter in his anxiety to kill a rabbit. She was in the line of fire.

A minister visiting in Pennsylvania, accompanied his brother on a squirrel hunting expedition, simply as an observer and not for the purpose of hunting. In fact he did not even carry a gun. The two men were sitting beside a tree when the minister observed what he was convinced was a black squirrel coming down the side of a tree. He attempted to show it to his brother. When he was unable to discern the object, the minister reached over and took the brother's gun. A well aimed shot was discharged, and upon investigation he discovered that he had struck a woman, who was also hunting squirrels, in the head and shoulders. The minister paid the hospital and doctor bills, a penalty of $50.00, and lost his license privileges for three years.

Deer damage to crops in Pennsylvania is not uncommon and farmers are permitted under certain conditions to kill the deer and retain the carcass for food.

During the month of August 1937, extensive deer damage occurred on a farm in Elk County, Pennsylvania. One of the farmer's sons and a friend decided to kill a deer for damage. Arming themselves with a flashlight and a firearm they went out through an orchard toward a wheat field, approaching

quietly. At frequent intervals they stopped to cast the rays of the flashlight about the field to "spotlight" a deer.

A brother, twenty-seven years of age, had returned from a nearby town and decided to take the family truck and attempt to kill a deer on the same property. He had no knowledge that his brother and his friend had gone for the same purpose. Slowly driving into the wheat field, he observed what he believed to be a deer, raising and lowering its head in the field. Assuming a prone position on the fender of the truck, he took careful aim with a Mauser 8 mm. high-powered rifle and discharged the weapon. 'Scarcely a moment after he had discharged the gun he heard cries for help. Running in the direction of his aim he found that he had shot his brother's companion through the chest and that he was dead. The same bullet had entered his brother's body through the center mediary line and injured him.

The injured brother was rushed to his home and the hospital. He lived to testify, several months later, his horrible experiences of that night.

Don't think that all the foolish accident cases occur in Pennsylvania. Each state appears to have its share of them.

One state reporting an accident said laconically, "Shot both feet while trying to kill a rabbit running up pant leg."

Another reports, "Using gun as a club, holding by the barrel, the rabbit kicked the trigger of the gun."

During the 1939 season New York reports 32 fatal and 164 non-fatal accidents; Michigan, 23 fatal and 82 non-fatal; and Maine, 11 fatal and 46 non-fatal.

What punishment has been inflicted by the Pennsylvania Commission as a result of its referee's hearings? Of the 146 cases determined, 28 were discharged, 21 lost their license for 1 year, 36 for 2 years, 18 for 3 years, 7 for 4 years and 34 for 5 years. Of the group, 41 persons have had their license privileges revoked until the termination of the revocation period, and in addition they must furnish satisfactory proof that all hospital and doctor bills have been paid in full before restoration will be effected. Numbered among the hearing cases were 29 self-inflicted injuries.

Twenty years ago the Congress of the United States passed legislation creating the United States Department of Labor, whose chief functions were to protect child and female labor and to aid the several states in their endeavors to create better working conditions and eliminate hazards endangering the lives of workmen. Today every one of the States has, in one form or another, created similar Departments or Boards dedicated to the same principles.

Industry has taken every precaution to see that guards are placed over as many moving parts of machinery as possible. Stairways are protected by guard railings. Pulleys and belts are encased in wire, so that a forgetful employee may not engage his hand or arm and lose the member. Goggles must be worn when certain work is being done. Rubber mats have been installed at electric switchboxes to safeguard from electrocution and shock. Periodically, strict inspections are made and industry is ordered to correct any safety hazards that appear.

Mining, one of the chief enterprises of many States, is highly supervised against safety hazards. Mine bosses are employed, inspectors checking their operations to see that no single phase of safety is overlooked, and yet a recent news item revealed that fifty-six miners had lost their lives in a single mine disaster. "How?" you inquire. Nobody seems to knew. The investigation has not been completed, we are told.

Mechanical agricultural implements have their share of safety devices.

Aviation, under the strict supervision of the Civil Aeronautics Commission, has established rules and regulations for pilots, copilots and students, as well as regulations concerning the use of aircraft in both private and commercial activity.

Football rules are constantly being studied with a view of protecting the lives of the participants.

Public utilities, including the steam railroad, street railways, motor transportation, electric, gas, water, telephone and telegraph, and other utilities, recently reported in one of the eastern states the loss of 473 lives and 7281 persons injured during 1939. Nearly sixty-five per cent of the fatal cases were charged against the steam railroad, while forty per cent. of the injury cases resulted from street railways.

Millions are spent each year for safety engineering, and still we have accidents!

"Bootleg" coal mining operations in Pennsylvania's 2500 holes in the lower anthracite region, engaging approximately 9,000 men, took the lives of fifty-eight persons during 1939. In drawing comparisons, it is evident that it is far less hazardous to hunt in Pennsylvania than it is to mine bootleg coal.

Accidents of a most peculiar and serious nature happen in homes every day.

A few weeks ago the Coroner of a large county in western Pennsylvania made public his annual report. He stated that 229 persons had suffered fatal accidents in the county during 1939. These figures did not include the deaths from murder and suicide, or the 213 deaths from automobile accidents. Falls, one of the more simple accidents, topped the list with 145 fatal cases. Burns and scalds, followed by poisonings, explosions and asphyxiation was the sequence of other causes. Fourteen miscellaneous fatal cases were tabulated; one included a fatal accident to a man using a straight razor to shave himself. It slipped from his hand, he grabbed for it, but it caught in the crook of his arm, severing an artery that caused death.

Yes, even your home can be a dangerous place to live.

It is equally dangerous to drive an automobile or be a passenger in one. The pedestrian hazard constantly prevails.

An exacting comparison of automobile and hunting accidents in Pennsylvania has proved to be quite interesting.

Motor vehicles are subjected, periodically, to rigid mechanical fitness inspections. Operators are required to successfully pass vision, ability and tests of highway laws before being permitted to operate a motor vehicle.

A fifty-mile speed limit is diligently enforced.

During the period of the general open hunting season in Pennsylvania, November 1 to December 15, 1939, Sunday's excepted, and between 7:00 A. M. and 5:00 P. M., there were 34 fatal and 336 non-fatal accidents.

Between the same dates and hours there were 1268 automobile accidents, **in rural districts only**, in which 33 persons were killed, 859 injured with 463 cases of property damage. Bear in mind that light and weather conditions were exactingly comparable.

In ratio, one person out of each 21,558 hunters was killed, and one out of each 2,181 persons was injured during this period.

Automobiles in rural districts contributed one fatal accident to each 26,609 passenger vehicles registered on December 15, 1939, and one non-fatal injury to each 1,022 registrations.

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Never pull a gun toward you by the barrel.

What Federal and State Agencies Are Doing for Wildlife

Photo Missouri Conservation Commission

Members of the Missouri Nature Knights are asked to sign the above pledge before they are accepted into the association, which is primarily an educational one. A series of ranks and emblems are awarded qualifying boys and girls as merit badges for work done.

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the fur buyers throughout the country in an effort to have them respect the laws and to encourage the trappers to do likewise.

An evaluation of biennial reports by conservation departments was presented by Dr. R. P. Hunter, Supt. State Board of Fisheries and Game, Hartford, Conn. Dr. Hunter stated that the reports issued by the several conservation agencies varied so greatly that comparable information cannot be gleaned from them. He found that the reports do not conform to any general standard size or style, and recommended that administrators study the best type of reports and try to improve their presentations accordingly.

In the discussion which followed it was pointed out that without some standard approved guide it would be difficult for administrators to adopt anything like a uniform style or size of reports; also that reports need not necessarily be prepared for the general public but rather for those who are sincerely interested as cooperators in the work of the Department; and that material which is intended for the general public should preferably be placed in special pamphlets written for that purpose.

A special committee was appointed to study this matter and report at the next annual convention.

I. T. Bode, Director, Conservation Commission, Jefferson City, Mo., presented a report of developments in the Missouri Program. The Missouri Commission is unique in its organic setup in that it was established by amendment to the state constitution which gives the Commission wider powers than those enjoyed by Commissions in the average state.

The Commission has a free hand in the selection and management of its program, the rates of compensation for employees, the use of its funds, etc.

The legality of the setup, which was tested twice before the Supreme Court, was fully sustained. In the last General Assembly three attempts to interfere with the Commission failed. The most recent attacks have been in the form of voters' petitions in an attempt to nullify or destroy the effectiveness of the constitutional amendment. The last of the three attacks will come before the voters of Missouri this fall.

The state has abandoned its quail and turkey farms. Chukar Partridges have been given up as a failure. Missouri's major emphasis now is upon management, not stocking. The Commission is also sponsoring extensive research activities, a Cooperative Game Management Program, and a Junior Program, financed in part with funds provided by the E. K. Love Foundation ($100,000). 4-H Clubs have been encouraged to do various kinds of work to benefit wildlife. With an expenditure of $200.00 for prizes, 711 girls and 955 boys (1,666 youngsters) built 110 approved ponds, planted 2,900 food patches, sowed 27,815 pounds of lespedeza, planted 30,623 trees, 8,666 shrubs and vines, fed 33,877 pounds of grain during the winter, stopped the burning of 2,985 woodlots, prevented clearing of 4,312 miles of fencerows, planted 8,333 rods of ditch banks to lespedeza, and built 1,619 winter feeding shelters.

Missouri also sponsors a Nature Knight's program in which certificates are issued to qualifying boys and girls, and a series of ranks and emblems are awarded as merit badges for work done. It is open to all the children of the state, and is primarily educational.

Dr. T. Gilbert Pearson, President Emeritus, National Association of Audubon Societies, New York City, gave a splendid account of an extended trip to South America, which took him to practically all parts of that country. He found that on the Barbadoes Islands birds which we protect zealously are being killed in large numbers without restriction. In Brazil there is much shooting of birds of all kinds, many of them species which migrate from the States. In Argentine similar conditions exist. His travels extended all the way to the Straits of Magellan. He found that in South America nothing is being done to protect wildlife, except to collect fees for licenses—and that very spotty. He could learn of no convictions for violations of the local game laws.

Some sentiment for bird protection was found among the leaders of the several countries visited, but usually there was lack of knowledge on game laws even by public officials. While in South America he prepared drafts of laws for several counties. He is planning to work with officials of six of the South American countries to further the cause of wildlife protection. What is needed most, in his opinion, is a dissemination of some of the knowledge we have gained relative to the value of wildlife, which he said would be a slow, arduous task.

Special Conferences

About thirty of the states were represented at a special conference with Dr. Gabrielson, Director of the Fish and Wildlife Service, and members of his staff on September 4, in which it was brought out by Dr. Frederick Lincoln that the prospects for waterfowl this fall are considerably better than a year ago; that the prospects on woodcock, according to all reports, are very discouraging. The best reports from the breeding grounds came from New York. Prince Edward Island also reported a much larger breeding stock than usual; elsewhere the reports indicated that the breeding stock was considerably below normal. Dr. Gabrielson asked for special reports from all administrators on woodcock flights. **He also urged that all the administrators do their utmost to help enforce the Federal regulations.**

Mr. Albert Day, who is in charge of the Federal Aid Program, gave a further report on the progress of the Pittman-Robertson plan, and stated that all states except Montana, Nevada, Louisiana and Florida are now eligible to participate in it. The Federal Aid Program has been responsible for the employment of many more technically trained men than formerly, about 125 such men now being engaged on Cooperative Federal Aid work.

The possibility of having the Pittman-Robertson Act amended to provide funds to cover the maintenance of projects established under its provisions was discussed. It was agreed that later the act should be so amended, but that for the present it would not be wise to raise this question before Congress.

Since no representative of the Fish Commission was present, Mr. Gordon also attended that part of the conference dealing with fisheries matters, a report of which was turned over to the Fish Commission.

Fisheries Society

The program of the Fisheries Society included a total of 72 papers, which will be published in the Annual Transactions of that organization.

A number of the discussions were of importance to game administrators, especially those having to do with stocking and its value. Research workers who reported their findings stated that the stocking of additional fish in waters which are already adequately stocked has been found to be an utter waste; that the percentage of such fish caught by the anglers in relation to the percentage of those produced naturally in the waters was entirely too low to justify stocking; that stocking of too many fish has a tendency to stunt the growth of all fish in the same body of water; and that it has been found that fall stocking of fish, except in certain lakes, is most unwise.

Among the resolutions adopted by the Fisheries Society was one endorsing the passage of the Buck Bill to launch a Federal Aid Program to assist the states in fisheries work; and another endorsing the Barkley Bill with the Mundt amendments.

The officers selected for the coming year are: President, Major James Brown, Kentucky; First Vice-President, Dr. John VanOosten, Michigan; Second Vice-President, Joe Hogan, Arkansas; Secretary-Treasurer, Dr. R. P. Hunter, Connecticut.

The 71st Annual Meeting will be held at St. Louis, August 25 and 26, in cooperation with the International Association's convention, which will be held August 28 and 29.

In addition to the meetings hereinbefore mentioned the American Society of Ichthyologists and Herpetologists held its 23rd annual meeting in Toronto, September 2 to 4 inclusive, and a number of the members of that organization participated in the Fisheries Society meetings.

WHAT CAUSES HUNTING ACCIDENTS?

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Since no lawful hunting is permitted in cities and boroughs, to keep the analysis as comparable as possible no cognizance was taken of automobile accidents in cities and boroughs.

What remedies have been suggested to control the offenders in hunting accidents? Most everybody has his own pet theory and expounds it freely.

Probably the most widely advocated has been to examine every hunter before he goes into the woods. I have queried a number of sportsmen who have loudly proclaimed this method as the solution to the problem. None has been able to suggest a method of accomplishing the desired objective. Cast aside the mechanics involved to examine 734,000 hunters in Pennsylvania, because that phase could be accomplished if worthwhile results were in sight. But are they? Most persons who handle a firearm know that it is a deadly weapon, and certainly need no demonstration to prove its potential possibilities as a lethal weapon. Examining a hunter on the component parts of a firearm would be of little value. When he appeared for examination he would be well drilled in safe handling, and how to load and unload the weapon. Of all the tests that have been suggested, no one has, and no one apparently can, devise the one test that should be applied. Man is a peculiar creature, and psychologists tell us that no two persons react exactly alike to similar emotional tests.

No person can tell what the other fellow is going to do under certain circumstances. Will he become frightened and shoot at random, or will he get even a mild case of "buck fever"? Will he shoot at a moving object in the firm belief that it is game, later to discover that he has shot another hunter in mistake? Most certainly he would not do these things while taking an examination under favorable conditions. **No scale or standard has yet been devised to measure the applicants' mental reaction under extraordinary conditions, which cannot be produced artificially,** such as he meets in the woods every day with birds flushing madly in their effort to escape, or big game cunningly slipping down a steep hillside. Until such a practical standard is devised, the examining of hunters would largely be a waste of time, effort and money. Its only value would be psychological.

The examination of automobile operators is compulsory in a great many States today. Despite comprehensive tests for vision, driving ability, laws and safety precautions, we still have a tremendous volume of automobile accidents annually.

A recent hunting accident provoked a number of persons to write to a certain newspaper, and protest that every hunter should be subjected to severe vision tests before being permitted to hunt. The offender it seems wore glasses to correct his vision. The letters reached the editor's desk and he commented upon them editorially, suggesting that something along that line should be worked out. Frankly, I don't believe vision tests

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	FATAL ACCIDENTS		NON-FATAL ACCIDENTS		TOTAL	
Total Accidents	No.	P. C.	No.	P. C.	No.	P. C.
Self Inflicted	16	36%	66	19%	82	21%
Inflicted by Others	28	64%	280	81%	308	79%
Ages of Victims						
Under 21 years	13	30%	107	31%	120	32%
Over 21 years	31	70%	232	67%	263	67%
Unknown			7	2%	7	1%
Ages of Offenders						
Under 21 years	2	8%	61	22%	63	20%
Over 21 years	19	67%	191	68%	210	68%
Unknown	7	25%	28	10%	35	12%
Accidents Occurred Through Use of						
Shotgun	24	54%	305	89%	329	84%
Rifle	19	43%	41	11%	60	15¾%
Revolver	1	03%			1	¼%
Where Accident Occurred						
Fields	14	31%	97	28%	111	28%
Brush	10	22%	123	35½%	133	34%
Open Woodlands	5	11%	54	16%	59	15%
Dense Woodlands	8	19%	51	14%	59	15%
Water	1	03%			1	¼%
Conveyance			1	½%	1	¼%
Camp	2	05%	4	1%	6	2%
Woods Road	4	09%	11	03%	15	4%
Public Highway			5	02%	5	1½%
Conditions						
Standing	25	57%	227	66%	252	65%
Bending Over	10	23%	22	6%	32	8%
Walking	9	20%	95	27%	104	26½%
Riding in Vehicle			1	½%	1	¼%
Alighting from Vehicle			1	½%	1	¼%
Weather Conditions						
Clear	26	59%	270	78%	296	77%
Rain	5	11%	17	5%	22	6%
Snow	3	07%	6	1%	9	2%
Fog	4	09%	13	4%	17	4%
Light	4	09%	24	7%	28	7%
Dusk	2	05%	9	3%	11	3%
Dark			7	2%	7	1%
Kind of Game Hunted						
Deer	22	50%	58	17%	80	21%
Waterfowl			1	½%	1	¼%
Small Game	12	27%	282	80½%	294	75%
Woodchuck	9	20%	5	2%	14	3½%
Trapping	1	03%			1	¼%
Red Worn by Injured						
Cap	5	11%	92	27%	97	25%
Back	4	09%	32	9%	36	9%
Both	14	32%	97	28%	111	28%
None	21	48%	125	36%	146	38%
Shot in Mistake for Game						
Yes	9	20%	9	3%	18	5%
No	35	80%	337	97%	372	95%

SUMMARY

	Small	Large	Total	
FATAL	22	22	44	11%
NON-FATAL	288	58	346	89%

WHAT CAUSES HUNTING ACCIDENTS?

Continued from Page 27

for hunters to be of any extensive value. I cannot convince myself that they would materially aid in decreasing accidents. The hunter seems to be hitting the bull's eye pretty well, even if it is a human being. My experience has taught me that a man who requires corrected vision is no more liable to go hunting than fishing, where in the latter instance he may, because of defective vision, make a false step out of a boat and be drowned. One sportsman in discussing the proposal, humorously stated that he believed that the Optometrists Society of America, or some such organization, had advanced the idea of vision tests with a view of getting some new business. That of course is ridiculous.

Hunting accidents are usually costly from a financial viewpoint, without regard to the loss of employment, earning power and suffering during the period of convalescence. I feel safe in saying that the average cost of a hunting accident, exclusive of loss of wages, averages between $50 and $60.

One case that I recall involved a hunter who discharged a .410 gauge shotgun, in some manner unknown to himself, resulting in a self-inflicted injury to his arm and shoulder that required hospitalization for nineteen weeks, and physicians and hospital bills amounting to more than six hundred dollars.

A recent hearing disclosed that a man who had been hunting for more than fifty years inflicted a thigh wound on his hunting companion who has been confined to his bed for more than three months with the injury. The hospital bill alone amounted to more than three hundred dollars, and his physician has assured him that he must return to the hospital in sixty days for another operation. The limb, his right one, through no fault of his own will be useless to him the balance of his life.

To me, some of the most pathetic cases are those in which persons suffer injuries through no fault of their own carelessness or negligence. The offender at the time of the accident usually promises everything under the sun, including the payment of the doctor and hospital bills, but treats the matter rather lightly after the victim recovers or dies. The following example fully illustrates the point, and is extracted from a case in which a 17 year old lad lost the sight of his right eye and incurred medical services in excess of $250.00. He was shot in mistake for a woodchuck at an estimated distance of forty to forty-five feet. These questions were asked of the victim and later supported by the sworn testimony of the offender:

Q. "Did you make a request of Mr.—— to pay any of these bills?"

A. "Yes sir."

Q. "When?"

A. "After I was out of the hospital."

Q. "What did he tell you?"

A. "He told me he was simply a W. P. A. worker and couldn't pay."

It is not likely that the bills will ever be paid by the offender. His license has been revoked for five years and he has been ordered to pay the doctor and hospital bills before the license will be reinstated.

May I contrast this case with another to prove that some people at least are still cognizant of both their moral and financial liabilities, despite a poor financial condition.

Last year we reviewed a case in which two negro hunters were involved in an accident. They were hunting woodchucks together in the late summer. Each had taken a position well known to the other, but one of them had moved to a new location in the belief that his luck would improve. But it got worse. His friend, seeing what he believed to be a woodchuck, declared that he watched its movements for fully two minutes. Being satisfied that it was a woodchuck he fired and ran to the spot some seventy-five yards away, only to find that he had injured his friend. Rendering every possible assistance the wounded man was removed to the hospital and confined for three weeks. The victim testified:

Q. "How much was your hospital and doctor bills?"

A. "I don't know, sah."

Q. "Can you estimate them for me?"

A. "No, sah, Mr. —— he done paid 'em."

The offender was then called and testified under oath

Q. "Did you pay Mr. ——'s hospital and doctor bills?"

A. "Yes, sah."

Q. "And how much were they?"

A. "The hospital bill was $84.00 and the doctor bill was $45.00. I dun paid Mr. ——'s wages while he was in the hospital."

Q. "How much did you pay him?"

A. "You see he is an ash collector and I paid him three doll'as a day while he was sick."

Q. "Did you do anything else for Mr. —?"

A. "Yes, sah; I hired a man to get his ashes and paid him too."

Incidents such as these are rare.

What is to become of dependent persons, the wives and innocent children in these families where the bread winner has been taken without warning? Many are destitute and can ill afford to bury the body.

Most States have legislation requiring the payment of reasonably substantial sums in cases such as these. Too frequently grand juries have refused to indict defendants despite the fact that they have made sworn statements of the circumstances, sufficiently strong to convict without a question of doubt. The bills of indictment have been returned by the Grand Jury, marked, "Bill Ignoramus", or bill ignored. Sympathy of great proportions must certainly react favorably to the accused in these cases when the grand jury apparently believes, "it was an accident"—"he didn't do it on purpose."

They are not nearly so charitable in many automobile accident cases, often returning criminal bills of indictment and heavy sums of indemnity in civil actions.

Adding to the problem of securing financial relief, survivors are frequently told by their lawyers that, "Mr. —— is judgment proof and nothing can be gained by filing a civil suit."

Some way must be found to indemnify, in adequate sums, those persons who, through no fault of their own, are incapacitated either temporarily or permanently, and the survivors, when loss of life results.

Possibly a short term compulsory insurance policy, to be obtained at a reasonable cost, would solve the indemnity problem. I am aware that there are persons who would contend that this method would cause more carelessness. Good authority doubts it very much. Where financial responsibility has been required in automobile cases the records definitely show that only in rare cases do these persons become second offenders. Those who are involved in hunting accident cases, involving heavy cash payments, might find it difficult to secure such a policy after having been in an accident.

Most certainly those who have been the offenders in hunting accidents, and particularly those whose licenses have been revoked, should not be permitted to hunt or trap again until they could furnish proof of financial responsibility for a reasonable period of time following restoration of license privileges.

Educational programs conducted in the high schools and colleges with competent instructors in firearms would prove highly beneficial. The youth of our country must be trained to handle and respect a firearm, whether intended for use in hunting, general recreational pursuit, or self-defense.

Recently I learned of a school teacher in Ohio who hit upon a novel and instructive plan. Utilizing his own personal time, he recruited from the high school boys and girls who indicated a desire for training with firearms. With a sizeable class, that has not yet lost interest in more than a year's training, he taught the subject from the ground up. Commencing with the story of gun powder, continuing with the manufacture of cartridges and shells, the class was taken step by step through the handling of firearms, to range fire and finally competition. There are some splendid shots among the students. If none of these students ever does any hunting they have at least been well grounded in the safe handling of firearms. Our compliments to the teacher and his achievement.

Sportsmen's organizations might well sponsor similar instruction for youthful members, and from the results of a recent survey it might be well to start with the present generation.

Two hundred eighty offenders queried, out of three hundred twenty-five non-fatal hunting accidents, indicated that but fifty-one are members of a sportsmen's organization; only eight were members of a rifle club; and but thirty-eight had military service in the armed forces of the government where they might have received instruction in firearms.

The families of forty-two victims were queried, and thirty-one replies were received. Of these, we were informed that but three of the victims had military service; one was a member of a rifle club, and only four were members of a sportsmen's organization.

The field of education on this subject is a wide one and should be vigorously encouraged.

The causes and remedies of hunting accidents have been studied by experts of every description. Some have placed the problem in a test tube and veiwed it from all angles. Others have viewed it microscopically, surrounded by large quantities of statistical reports. Laws have been passed and rigidly enforced. Licenses have been revoked and defendants ordered to pay huge medical and

hospital bills. The examination of hunters, both for vision and capabilities in handling weapons, has been suggested and so far discarded. And still we have too many hunting accidents!

We cannot close our eyes to the facts no matter how displeasing they may be, and no plan can ever be successful until every single person who goes into the fields or woods to hunt is willing to entirely subordinate him or herself to the two main causes of hunting accidents — **greed** and — **carelessness**.

HOW TO PREPARE AND COOK SMALL GAME

(Continued from Page 9)

To prepare: After pheasant has been picked, dressed and washed inside and outside, and dried, fill with bread and egg stuffing, also green peppers if desired. Truss with string into compact shape, and lay securely on it's back in roasting pan. Dredge trussed pheasant with flour, salt and pepper, dot with bits of butter, and place in hot oven. Have the oven pretty hot when the bird is placed in it, so as to at once seal the savory juices within the meat. As soon as the flour is browned, reduce temperature to 350°F. and begin to baste with a cup of hot water every 10 minutes or so; never stick a fork tine in the breast or other portions of the bird, as this will permit the liquids to escape.

Roast as recommended for one hour for a 2 or 3 pound pheasant, and considerably more for 4 to 4½ pound ringneck, as this gentleman will likely be a much more mature game bird. Bird should be well browned and golden in lighter parts, when you take him out. Depends a good deal upon how the family likes their meat—rare, medium, or well done—and also, the age of the bird.

Mashed potatoes, roast Irish or sweet potatoes, stewed tomatoes, chili sauce, and hot biscuits, all go well with roast pheasant. So, also, does cranberry sauce, cucumber pickles, chow chow or green tomato relish.

Stuffing for roast pheasant: 4 cups of bread crumbs, 1 teaspoonful of salt, ¼ teaspoon of pepper, 3 eggs, slightly beaten, ½ teaspoon of sage, sprinkle of thyme, bits of parsley, green peppers cut up as desired, and a little milk. Mix in order given, combine thoroughly, and use to stuff pheasant, guinea fowl, chicken, ruffed grouse, quail, or any game bird or fowl, of the upland type. Fine for domestic or wild turkey.

Roast Quail

Prepare and stuff exactly like pheasant or grouse. Place in hot oven until brown, then reduce to 350°F. Baste with hot water, every now and then. Bake at least 20 minutes, or until breasts are tender. Provide 1 to 2 quail, per person, if possible. Serve with mashed or baked Irish potatoes, baked sweet potatoes, stewed tomatoes, crisp celery, peas, and chili sauce, chow chow, green pepper relish or pepperslaw

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"Deer raising havoc with planted patches at Ney Shed; also ringnecks have done much damage to corn at Maiden Creek."—Game Protector Herbert Diehl, Berks, Lebanon and Schuylkill Counties.

THE GREAT HORNED OWL

Continued from Page 11

sportsmens' organizations conduct vermin control campaigns, when they doubtless would have been killed regardless of their status under the bounty regulations, the Pennsylvania Game Commission felt that the desired control of these birds was not effected by the payment of bounties. Thus the policy was discontinued.

All identifications were based upon the presence of characteristic bones, feathers, fur, appendages and smaller items which lead to positive identification of the prey.

FIGURE II

	MATURE MALES			MATURE FEMALES		
	Maximum	Minimum	Average*	Maximum	Minimum	Average*
Weight (lbs.)	4.10	1.46	2.879	5.10	1.89	3.764
Wingspread (ins.)	57.3	49.0	52.808	60.2	51.4	56.286
Length (ins.)	24.2	19.1	21.325	25.7	19.7	22.611

* Average weights and measurements given are those derived from a compilation of all mature specimens rather than from that of the two extremes.

FIGURE III

MAMMALIAN DIET OF THE GREAT HORNED OWL

MAMMAL	Number	No. of Stomachs	% Mammalian Diet	% Total Diet
1. Rabbit (*Sylvilagus* sp.)	476	476	55.47	41.07
2. Mice (includes the genera *Microtus, Peromyscus, Zapus* and *Mus*)	179	145	20.85	15.44
3. Rats (includes *Rattus norvegicus* and *Neotoma pennsylvanica*)	85	83	9.90	7.33
4. Grey Squirrel (*Sciurus carolinensis*)	32	32	3.72	2.76
5. Shrews (includes the genera *Blarina* and *Sorex*)	22	15	2.56	1.90
6. Red Squirrel (*Sciurus hudsonicus*)	18	18	2.10	1.55
7. Skunk (*Mephitis nigra*)	10	10	1.17	.86
8. Mole (*Scalopus aquaticus*)	5	4	.58	.43
9. Opossum (*Didelphlis virginianus*)	4	4	.50	.34
10. Muskrat (*Ondatra zibethica*)	4	4	.50	.34
11. Varying Hare (*Lepus americanus*)	3	3	.35	.26
12. Bat (*Myotis lucifugus*)	3	3	.40	.26
13. Weasel (*Mustela* sp.)	2	2	.20	.17
14. Fox Squirrel (*Sciurus niger*)	1	1	.10	.09
15. Flying Squirrel (*Glaucomys volans*)	1	1	.10	.09
16. Porcupine (*Erethizon dorsatum*)	1	1	.10	.09
17. Unidentified Mammals	12	12	1.40	1.03
Totals	858	814	100%	74.01

AVIAN DIET OF THE GREAT HORNED OWL

BIRDS	Number	No. of Stomachs	% Avian Diet	% Total Diet
1. Poultry*	66	66	27.73	5.70
2. Ruffed Grouse (*Bonasa umbellus umbellus*)	22	14	9.25	1.90
3. Screech Owl (*Otus asio asio*)	13	13	5.47	1.12
4. Ringneck Pheasant (*Phasianus colchicus torquatus*)	8	8	3.36	.69
5. Bobwhite Quail (*Colinus virginianus virginianus*)	7	7	2.94	.60
6. Starling (*Sturnus vulgaris*)	4	4	1.68	.34
7. Red Shouldered Hawk (*Buteo lineatus lineatus*)	2	2	.84	.17
8. Long Eared Owl (*Asio wilsonianus*)	2	2	.84	.17
9. Wild Duck (*Anatidae* sp.)	1	1	.42	.09
10. Wild Turkey (*Meleagris gallopavo silvestris*)	1	1	.42	.09
11. Sparrow Hawk (*Falco sparverius sparverius*)	1	1	.42	.09
12. Crow (*Corvus brachyrhynchos brachyrhynchos*)	1	1	.42	.09
13. Purple Grackle (*Quiscalus quiscula quiscula*)	1	1	.42	.09
14. Flicker (*Colaptes auratus auratus*)	1	1	.42	.09
15. Unidentified Birds	108	104	45.37	9.31
Totals	238	226	100%	20.54

* Includes domestic chicken, duck, Guinea fowl and turkey.

MISCELLANEOUS DIET OF THE GREAT HORNED OWL

(Including reptiles, amphibians, fish, insects, crustaceans and gastrapods)

SPECIES	Number	No. Stomachs	% Total Diet
1. Snakes (including *Thamnophis sauritus, Caluber constructor, natrix* sp.)	15	13	1.30
2. Hellbender (*Cryptobranchus alleganiensis*)	1	1	.09
3. Fish (species unknown)	7	7	.60
4. Insects (Unclassified)		34	2.93
5. Crayfish (*Cambarus* sp.)	5	5	.43
6. Snail (*Planorbis* sp.)	1	1	.09
Totals	29	61	5.44

An Analysis of Methods used to Collect Game-Kill Reports

(Continued from Page 23)

Connecticut did, or to break down the licenses issued into age groups, occupation groups, etc., and then utilize comparable samples in making the tabulation. However, to do the latter it would probably require almost as much clerical work as is necessary to make the complete tabulation by the punch card method. The drawback to any plan which does not compel everyone to report is that hunters tend to become increasingly careless year by year when they find that a complete tabulation is not being made, that checking on cheating is not done; and certainly the check against reports of issuing agents would be far less thorough.

Records for 25 Years

Pennsylvania's game-kill records for the past 25 years (the first 22 years based on field etimates, the remaining 3 on individual reports) are not only interesting but of great benefit to the Commission. They are submitted for the record in two condensed tables.

Since we do not obtain reports from farmers who may hunt on their own and adjacent lands without licenses (but a large percentage of whom do regularly secure licenses), the figures we have recorded, except during one five-year span, are still considerably below the actual kill. However, they give the Commission some very definite trends. For example, an analysis of these figures indicate that our average kills of cottontail rabbits and squirrels, considering the large numbers involved, have been holding up fairly well throughout the entire period; that Pennsylvanians still enjoy wild turkey hunting and that the supply of these birds has recently been considerably higher than in previous years; that ruffed grouse have gone through their usual high and low periods in Pennsylvania as elsewhere; and that bobwhite quail are furnishing a considerable amount of sport for Pennsylvania hunters, notwithstanding our severe winters which periodically decimate the breeding stock. On the other hand, it is interesting to note that the ringneck kill now annually exceeds the combined bag of our native ruffed grouse and bobwhite quail.

The most striking figures of all, of course, are the statistics on our kill of deer and bears. During the period when the deer herd made such an amazing increase our growing young forests began shading out much succulent undergrowth, and the deer seriously overbrowsed that which remained. The result is that our forest species of game, such as ruffed grouse and varying hares (and in some sections cottontails and wild turkeys) have suffered from lack of suitable food and cover. Naturally in such areas their numbers have decreased very noticeably. The varying hare is our best barometer of this changed condition. In former years the kill of these animals was quite high. Now they are almost extinct in large portions of the deer country, and we have no open season for them at this time.

As will be observed from these tables, the total annual bag of game has held up remarkably well in spite of the occasional severe winters and the enormous increase in the average annual number of hunters. Under present-day conditions the game supply must be distributed among more men, and the average kill per man is lower than it was 15 or 20 years ago.

With the complete tabulations of the past three years as a start, it is easy to see how invaulable these statistics will be to the Commission in planning its programs ten, fifteen and twenty years hence.

Comparative Compilation Covering Pennsylvania's Recorded Game-Kill For Five-Year Period (1935-1939)

(Based on Field Estimates, 1935 and 1936; For Years 1937, 1938 and 1939 on Complete Tabulations of Hunters' Reports.)

SPECIES	1935	1936	1937 (93%*)	1938 (98%*)	1939 (98½%*)	Total Kill For Period	Average Annual Kill
Elk	(Closed)	(Closed)	(Closed)	(Closed)	(Closed)	(Closed)	(Closed)
Deer (Antlered Bucks)	23,802	18,084	39,347	(Closed)	49,106	130,339	26,067
Deer (Antlerless)	46,668	(Closed)	(Closed)	171,662	14,581	232,911	46,582
Bears	402	356	537	384	535	2,214	442
Rabbits	1,971,505	1,338,892	3,074,820	4,263,759	3,804,701	14,453,677	2,890,735
Hares	8,659	(Closed)	2,420	2,120	(Closed)	13,199	2,640
Squirrels	1,193,856	373,785	1,056,408	1,106,914	945,471	4,676,434	935,286
Raccoons	33,579	34,736	29,842	36,046	38,452	172,655	34,531
Wild Turkeys	4,498	5,208	6,619	6,766	5,191	28,282	5,656
Ringneck Pheasants	281,000	267,890	371,526	517,280	471,539	1,909,235	381,847
Ruffed Grouse	190,955	96,909	177,683	224,479	237,245	927,271	185,454
Quail	217,247	42,095	105,795	109,891	111,674	586,702	117,340
Woodcock	36,856	25,455	57,244	50,085	40,816	210,456	42,091
Shore Birds	12,390	17,407	12,657	8,717	6,294	57,465	11,493
Waterfowl	20,456	27,546	16,758	21,329	38,474	124,563	24,912
Grackles (Blackbirds)	83,920	60,245	78,543	78,613	47,449	348,770	69,754
Woodchucks	No Record	No Record	No Record	145,528	178,691	324,219	(a)162,109
Total Pieces of Game	4,125,793	2,308,608	5,030,199	6,743,573	5,990,219	24,198,392	4,936,939
Total Weight in Tons (Hog Dressed)	6,391	3,106	6,402	12,762	8,897	37,558	7,512
LICENSES ISSUED							
Resident	606,469	534,573	598,261	654,146	652,323	3,045,772	609,154
Non-resident	8,460	7,124	8,357	7,584	8,991	40,516	8,103

* Percentages indicate number of hunters' reports on which tabulation is based.
(a) Average annual kill in total based on record for 2 years only.

Conclusions and General Recommendations

It is generally agreed that the wildlife administrators of the United States, Canada and Alaska need dependable statistics for their guidance in discharging regulatory responsibilities, or for the purpose of presenting factual information to legislative bodies. They need them especially as a guide in future planning. Every official except two who responded to the recent questionnaire indicated a desire for such statistics; the other two did not deem them of value.

From studies made by the writer and numerous others, it is clearly evident (1) that license agents can not be depended upon to collect information when applicants apply for new licenses; (2) that the information so obtained is too incomplete and is generally unreliable, (3) that many who held licenses the previous season do not secure licenses and therefore submit no reports when the license agents make such collections; (4) that the information so assembled is far too slow reaching the administrators to be of value except for statistical records; and (5) that other important values, which might be obtained by individualizing the responsibility for making the reports direct to the department promptly after the season, are lost.

Based upon the foregoing analysis of different systems in use and the problems encountered, the following recommendations are submitted:

1. That every State, Province and Territory in North America should work toward the collection of reasonably complete, comparable game-kill statistics.
2. That it is wise to plan our procedure carefully, then stick to the same general method indefinitely so that statistics may be truly comparable.
3. That statistical experts and tabulating machine firms should be consulted relative to forms and the most efficient and economical methods to use before printing forms.
4. That the reporting forms should always be made **as simple as humanly possible** so the licensee may easily understand what is wanted, thereby avoiding confusion and resistance to filing. It is unwise to ask for information that may not readily be supplied by the average hunter. Reporting forms should preferably be part of the license, a self-addressed mailing card.
5. That an effort should be made to secure reports from all holders of licenses, whether any game has been killed or not, as promptly as possible after the close of the general hunting season to assure reasonable accuracy. Reports filled out months later are of doubtful accuracy, and of little value in handling situations where prompt regulatory steps are desirable.
6. That the plan adopted be enforceable, but that it be approached educationally at the beginning. The penalty should be barely enough to cover cost of collection. Denial of license has psychological value, but if not enforced it soon loses its effectiveness. However, denial of licenses for the next year for failure to report game bagged requires costly central record and follow-up systems, and can be managed efficiently only where all licenses are issued from a central point. The objections to such central issuance seem to outweigh the advantages.

Comparative Compilation Covering Pennsylvania's Recorded Game-Kill For 25 Years (1915-1939)

(Based on Field Estimates 1915 to 1936 Inclusive; For Years 1937, 1938 and 1939 on Complete Tabulations of Hunters' Reports.)

SPECIES	First Five Years 1915-1919		Second Five Years 1920-1924		Third Five Years 1925-1929		Fourth Five Years 1930-1934		Fifth Five Years 1935-1939*		Entire 25-Year Period	
	Total Kill For Period	Average An'ual Kill	Total Kill For Period	Average An'ual Kill	Total Kill For Period	Average An'ual Kill	Total Kill For Period	Average An'ual Kill	Total Kill For Period	Average An'ual Kill	Total Recorded Kill 25 Years	Average Annual Kill
Elk	None	None	33	6	59	12	6	1	(Closed)	(Closed)	98	4
Deer (Antlered Bucks)	9,427	1,885	28,485	5,697	56,129	11,225	106,252	21,250	130,339	26,067	330,632	13,212
Deer (**Antlerless)	None	None	134	26	27,421	5,484	76,234	15,246	232,911	46,582	336,700	13,464
Bears	1,850	370	2,922	584	2,325	465	2,010	402	2,214	442	11,321	452
Rabbits	10,605,035	2,121,007	19,299,860	3,859,972	15,985,414	3,197,083	13,509,892	2,701,978	14,453,677	2,890,735	73,853,878	2,952,951
Hares	During this period no separate record of hares killed was maintained						107,871	21,574	13,199	2,640	121,070	(a)12,107
Squirrels	1,371,195	274,239	4,882,560	976,512	4,591,264	918,252	3,606,903	721,380	4,676,434	935,286	19,128,356	764,867
Raccoons	103,601	20,720	279,260	55,852	212,176	42,435	166,964	33,392	172,655	34,531	934,656	37,377
Wild Turkeys	19,524	3,905	21,465	4,293	13,507	2,701	17,081	3,416	28,282	5,656	99,859	3,993
Ringneck Pheasants	22,088	4,417	142,496	28,499	705,799	141,159	1,333,704	266,741	1,909,235	381,847	4,113,322	164,348
Ruffed Grouse	711,906	142,381	2,260,440	452,088	1,129,705	225,941	688,056	137,611	927,271	185,454	5,717,378	228,639
Quail	127,886	25,577	491,065	98,213	955,674	191,135	751,101	150,220	586,702	117,340	2,912,428	116,458
Woodcock	{117,239	{ 23,448	{147,747	{ 29,549	{281,912	{ 56,382	{242,412	{ 48,480	210,456	42,091	{1,057,231	{ 42,275
Shore Birds									57,465	11,493		
Waterfowl	110,091	22,018	241,945	48,389	261,641	52,328	158,056	31,611	124,563	24,912	896,296	35,845
Grackles (Blackbirds)	No Record	No Record	No Record	No Record	59,821	(b) 59,821	758,890	151,778	348,770	69,754	1,167,481	(c)106,083
Woodchucks	No Record	No Record	No Record	No Record	No Record	No Record	No Record	No Record	324,219	(d)162,109	324,219	(e)161,824
Total Pieces of Game	13,199,842	2,639,967	27,798,412	5,559,680	24,282,847	4,904,423	21,525,432	4,305,080	24,198,392	4,936,939	111,004,925	4,653,929
Total Weight in Tons (Hog Dressed)	10,761	2,152	27,638	5,527	27,060	5,415	29,670	5,934	37,558	7,512	132,687	5,308
LICENSES ISSUED			(See comments below)									
Resident	1,580,671	316,134	2,367,134	473,426	2,486,881	497,376	2,733,625	546,725	3,045,772	609,154	12,214,083	488,563
Non-resident	3,388	677	10,488	2,097	17,550	3,510	31,214	6,243	40,516	8,103	103,156	4,126

* Figures for 1937 are based on complete tabulation of reports from 93% of hunters; 1938, 98%; and 1939, 98½%.

(a) Average annual kill in total based on record for 10 years only.
(b) Record kept for 1 year only during this period.
(c) Average annual kill in total based on record for 11 years only.
(d) Record kept for 2 years only during this period.
(e) Average annual kill in total based on record for 2 years only.

** The first big reduction in does occurred in 1928. Up to that time, with few minor exceptions, all deer bagged were antlered bucks. During the entire period 330,304 antlered bucks and 336,614 antlerless deer, or a total of 666,918 were bagged. No antlered buck seasons in 1928 and 1938. About 25% of antlerless deer were males.

Comments on 1920-1924 Period

During this period an attempt was made to calculate the statewide kill, using the estimates of field officers and limited sample tabulations of individual reports from hunters as a basis. Without much more complete tabulations this was found to be unsafe, so this method was thereafter discontinued. This accounts for the high figures recorded during said period.

Rubber?...Leather?...Fall Footgear?...Problem Plagues Hunters

by

Kenneth A. Reid

★

WHAT kind of footgear shall the outdoorsman buy for the fall hunting season? That is a question over which almost every hunter puzzles at one time or another.

To begin with a great deal depends on having footgear of the right kind, suited to the use to which it will be put. Without it the best of trips is likely to be spoiled or at least badly handicapped. The hunter, like any other outdoorsman, travels on his feet and if they are uncomfortable they manage to take a lot of the joy out of living. Despite the wide range of footwear, in leather and rubber, of many types and varying prices from which the hunter can choose, the problem is not easy of solution.

Most men prefer boots of one kind or another to low shoes. I for one heartily concur in this opinion. True, a lot of hunters buy a boot two inches or more higher than they require. But for the rough and ready usage of the autumn seasons I for one want nothing to do with low shoes.

When it is all said and done the boot question pretty much sums up to this: No leather is really waterproof. Water-resistant, yes, but not 100 percent so. The greatest advantage of leather shoes or boots over rubber is the fact that they permit the feet to "breathe" and so cause less perspiration. That automatically indicates that they are porous. And fill those pores with grease as you will, no leather shoe that I have ever tested—and I have tested plenty—will remain completely waterproof through the rigors of a long day in the hunting field.

Boot Grease Will Help

There are various boot greases and dressings available that will help a lot. Several commercial kinds are excellent. One of the best I have tried is cheaply and easily made at home by mixing together equal parts of a cheap grade of castor oil and melted beef tallow. Apply it liberally. It will keep the leather soft and as nearly waterproof as anything I know of. But it's messy around the house or camp. Better keep the boots away from the rugs and the wife's best furniture after you have dressed 'em.

Rubber footgear is heavy and undeniably hard on the feet, more so with some individuals than with others. Many men seem unable to endure rubber shoes. But for those that can wear 'em they have the advantage of being completely waterproof.

Leather for Dry Days

Personally I have tried out various types and weights of shoes and boots, both leather and rubber, for hunting use, and I have reached some pretty definite conclusions. However, they represent only my own choice. You are free to disagree, but here they are:

For dry days, bird hunting, rabbit hunting or squirrel hunting, give me a good grade of laced leather boot, not too high and not too heavy, but with a hard sole.

For wet rainy days or for late season rabbit hunting when there is snow on the ground or small pools to wade through, and decidedly for the deer and coon seasons which are almost certain to bring a lot of wetness underfoot, give me a laced rubber shoe, or a "feather-weight" rubber boot of the kind that fits snugly around the ankle and fastens at the top with a strap or short lace.

Buy Them Big

No leather shoes for me in deer season, thank you! I've tried some of the best on the market, greasing 'em morning after morning and coming back to camp at noon with feet drenched from melting snow and ready to ache with cold if I halted on a runway for a quarter of an hour.

In buying your hunting shoes, either leather or rubber, be sure to get 'em roomy. About two sizes larger than your regular everyday shoes will not be far from right. Pad 'em, especially in the case of rubber, with a felt or sheep's-wool insole. That will insulate your foot from the ground and is the first step in keeping warm feet in hunting season weather. Then plan to wear two pairs of socks. I prefer a light weight silk pair next to my feet and a heavy woolen pair over those. That is the remedy for cold feet, of which so many men complain when wearing rubber footgear.—*National Director, Izaak Walton League of America, and former member, Pa. Fish Commission.*

COOPERATION WITH FARMERS

Since small game hunting is conducted largely on privately owned farm lands, your favorite sport depends on your being a good sportsman. When you hunt on a farm, recognize the fact that you are in reality the guest of the farmer. Respect him accordingly, aid in protecting his property, and less land will be posted against hunting. He will be your friend if you and other hunters treat him honorably.

Every good sportsman will:

1. Ask a farmer's permission to hunt on his land, and park his car where it won't interfere with him.
2. Never cut or otherwise damage fences; nor leave gates open or bars down; nor destroy posters.
3. Never tear down stone piles, rail piles, etc., in quest of wounded game.
4. Never walk on freshly seeded grain fields.
5. Never shoot near buildings or livestock; nor near men who are working.
6. Refrain from shooting species of game which the farmer requests be protected.
7. Never carry away fruit or vegetables without paying for them unless permission is first secured.
8. Never hunt on a farm in a group of more than five; nor with too many dogs.
9. Always avoid "combing" an area for the last piece of game; instead leave seed stock for next year's breeding season.
10. Never overlook an act of vandalism or a violation of law by another hunter. Report such acts to the proper person, either a game protector, the farmer or person in charge of the land, or to the Game Commission in Harrisburg.
11. Cultivate the friendship of the farmer or the person in charge of the land.
12. When the day's hunt is finished, take time to thank the farmer for the courtesy he extended, and even offer to share game secured with him.

ASTRONOMICAL CALENDAR
For November, 1940

Date	Day of Week	Sun Rises	Sun Sets
November	1, Friday	6:36	5:05
"	2, Saturday	6:37	5:04
"	3, Sunday		
"	4, Monday	6:40	5:01
"	5, Tuesday	6:41	5:00
"	6, Wednesday	6:42	4:59
"	7, Thursday	6:43	4:59
"	8, Friday	6:44	4:57
"	9, Saturday	6:46	4:56
"	10, Sunday		
"	11, Monday	6:48	4:54
"	12, Tuesday	6:49	4:54
"	13, Wednesday	6:50	4:53
"	14, Thursday	6:51	4:52
"	15, Friday	6:52	4:51
"	16, Saturday	6:54	4:50
"	17, Sunday		
"	18, Monday	6:56	4:49
"	19, Tuesday	6:57	4:48
"	20, Wednesday	6:58	4:47
"	21, Thursday	6:59	4:47
"	22, Friday	7:00	4:46
"	23, Saturday	7:01	4:46
"	24, Sunday		
"	25, Monday	7:04	4:45
"	26, Tuesday	7:05	4:44
"	27, Wednesday	7:06	4:44
"	28, Thursday	7:07	4:43
"	29, Friday	7:08	4:43
"	30, Saturday	7:09	4:43

OFFICIAL 1940 OPEN SEASONS AND BAG LIMITS

(AS FIXED BY GAME COMMISSION AT MEETING OF JULY 11, 1940).

Open season includes both dates given, Sundays excepted for game. **On November 1 no hunting of any kind before 9 A. M.** With this exception, shooting hours daily are 7 A. M. to 5 P. M., except from July 1 to September 30 inclusive 6 A. M. to 7:30 P. M., E. S. T. Traps may not be set before 7 A. M. on the first day of the seasons for trapping in open counties. Raccoons may be hunted at night with a noon-to-noon daily limit.

UPLAND GAME (Small game possession limit three days' bag)	BAG LIMITS Day	BAG LIMITS Season	SEASONS Open	SEASONS Close
Woodchucks (Groundhogs)	4	Unlimited	July 1	Sept. 30
Ruffed Grouse	2	10	Nov. 1	Nov. 30
Quail, Bobwhite	5	15		
Hungarian Partridges (3 counties only)*	2	6		
Wild Turkey (See 8 counties closed below)*	1	1		
Ringneck Pheasants, males only	2	12		
Grackles (commonly called Blackbirds)	Unlimited			
Rabbits, Cottontail	4	20		
Squirrels, Gray, Black and Fox Combined kinds	6	20		
Squirrels, Red	Unlimited		Nov. 1	Sept. 30, 1941
Raccoons, all counties by individual or hunting party	1	15	Nov. 1	Dec. 31
Raccoons, by traps (21 counties closed below)*		15	Nov. 1	Dec. 31
Bear, over one year old by individual (See 10 counties closed below)*	1	1	Nov. 18	Nov. 21
Bear, over one year old by hunting party of five or more*	2	2		
Deer, both sexes, **except those with only a visible spike antler or antlers without points**	1	1	Dec. 2	Dec. 14
Deer, as above, by hunting party of 6 or more	6	6		

NO OPEN SEASON—Chukar Partridges, Sharp-tailed Grouse, Doves, Varying Hares (Snowshoe Rabbits), Deer with only a visible spike antler or antlers without points, Elk and Cub Bears.

FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates).

Minks	Unlimited	Nov. 1	Jan. 31, 1941
Otters (By traps only, in 6 counties)*	4	Nov. 1	Jan. 31, 1941
Muskrats (By traps only)	Unlimited	Dec. 1	Dec. 31
Beavers (Traps only; 27 counties closed)*	3	Mar. 1	Mar. 15, 1941
Opossums and Skunks	Unprotected	until	Sept. 30, 1941

*SPECIAL COUNTY REGULATIONS

FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates).

HUNGARIAN PARTRIDGES—Hungarian Partridges may be killed only in the counties of Lycoming, Montour and Northumberland.

TURKEY—No Turkey season in Cameron, Clarion, Elk, Forest, Jefferson, McKean, Potter and Warren Counties.

RACCOON TRAPPING—No Raccoon trapping in Beaver, Berks, Bucks, Butler, Cambria, Carbon, Chester, Dauphin, Delaware, Lancaster, Lawrence, Lebanon, Lehigh, Mercer, Montgomery, Northampton, Northumberland, Philadelphia, Schuylkill, Snyder and York Counties.

BEAR—No Bear season in Adams, Bedford, Blair, Cumberland, Franklin, Fulton, Huntingdon, Juniata, Mifflin and Perry Counties.

OTTER TRAPPING—Otter trapping only in Lackawanna, Monroe, Pike, Susquehanna, Wayne and Wyoming Counties.

BEAVER TRAPPING—Beaver trapping in all counties except Armstrong, Beaver, Bradford, Cambria, Cameron, Carbon, Centre, Clearfield, Columbia, Fayette, Greene, Indiana, Jefferson, Lycoming, McKean, Montour, Northumberland, Potter, Schuylkill, Snyder, Somerset, Sullivan, Tioga, Union, Washington, Westmoreland and Wyoming. One person may set and tend 10 traps only.

SNARES—Snares without springpoles may be used for taking predators only in Cameron, Clarion, Clinton, Elk, Forest, McKean, Pike, Potter, Susquehanna, Warren, Wayne and Wyoming Counties between December 16 and March 31, 1941.

FEDERAL SEASONS MIGRATORY GAME BIRDS

	DAILY BAG LIMITS	1940 OPEN SEASON (Sundays Excepted)
Rails and Gallinules (except Sora and Coot), combined kinds	15	Sept. 1-Nov. 30
Sora	15	
Woodcock	4	Oct. 16-Oct. 30
Wild Ducks (except Wood Ducks)	10*	Oct. 16-Dec. 14
Wild Geese (combined kinds)	3	
Snipe, Wilson's (Jacksnipe)	15	
Coots (Mudhens)	25	

NO OPEN SEASON—Ross's Geese, Wood Ducks and Swans. Magazine shotguns must be plugged to 3 shots.

SHOOTING HOURS—(Standard Time) Ducks, Geese and Coots, Sunrise to 4 P. M.; Rails and Gallinules, 7 A. M. to 5 P. M., except in Tidal Marsh Areas Sunrise to Sunset; Woodcock and Snipe, 7 A. M. to 5 P. M. EXCEPTION: No hunting of any kind before 9 A. M. November 1.

*In the daily duck limit only 3 Canvasbacks, Redheads, Buffleheads or Ruddy Ducks, or these combined species, may be taken. Possession limit: Ducks, Geese and Woodcock, twice the daily bag; other species daily bag only. Possession lawful 20 days after season.

NOTE: See posters in Post Offices, or write Game Commission, Harrisburg, Pa., for complete regulations and methods of hunting migratory game birds.

OBEY THE LAW » » » HELP YOUR PROTECTOR

Stop the cheater by reporting his license number! Automobile license numbers will help too!

The vast majority of Pennsylvania's hunters are real sportsmen, and observe the law. They can help themselves by reporting promptly those who violate. (Use the list below:)

DISTRICT GAME PROTECTORS

COUNTY			Phone
Adams	Leo Bushman, 264 Baltimore St., Gettysburg		
Allegheny	R. A. Liphart, 334 E. 11th Ave., Homestead		1550
Armstrong	R. H. McKissick, 129 Rebecca St., Kittanning		785
Beaver	J. B. McGregor, 1099 Turnpike St., Beaver		1508
Bedford	John S. Dittmar, Loysburg		7
Berks	Joseph Leiendecker, 18 Berks Place, Wyomissing	Reading	4-2713
Blair	C. C. Brennecke, 2520 21st Ave., Altoona		2-6971
Bradford	Rodman C. Case, 927 Main St., Towanda		337
Bucks	S. Earl Carpenter, 41 Taylor Ave., Doylestown		5168
Butler	Troy C. Burns, N. Main St. Extension, Butler		32100
Cambria	E. B. Thompson, 396 Coleman Ave., Johnstown		F35911
Cameron	Max N. Ostrum, 321 Third St., Emporium		4482
Carbon	W. C. Achey, 311 First St., Weatherly		4741
Centre	Thomas A. Mosier, 120 N. Spring St., Bellefonte		38
Chester	J. E. McCannon, 83 S. 5th Ave., Coatesville		191
Clarion	H. J. Updegraff, Shippenville		64
Clearfield	Frank E. Couse, 11 Weaver St., Clearfield		1354
Clinton	M. L. Reeder, R. No. 1, Lock Haven		108
Columbia	M. L. Hagenbuch, 295 Penn St., Bloomsburg		692
Crawford	G. W. Keppler, 255 Locust St., Meadville		1146
Cumberland	J. M. Foreman, 239 W. South St., Carlisle		2343
Dauphin	M. P. Motter, 4231 Elmerton Ave., Colonial Park	Harrisburg	55528
Delaware	B. J. Davis, 436 E. Baltimore Ave., Media		295
Elk	E. L. Shields, Eshbach Road, St. Marys		5341
Erie	John G. Kennedy, 238 E. 22nd St., Erie		03-213
Fayette	T. T. Schafer, 16 Wilmington St., Uniontown		3794
Forest	Carl B. Benson, Tionesta		189
Franklin	Wm. W. Britton, 573 E. Catherine St., Chambersburg		195
Fulton	I. C. Baumgardner, S. 2nd St., McConnellsburg		22
Greene	J. F. Blair, 123 N. Richhill St., Waynesburg		267
Huntingdon	T. F. Bell, 407 16th St., Huntingdon		158
Indiana	O. M. Pinkerton, 21 S. 12th St., Indiana		1934
Jefferson	L. J. Haney, Brookville		366R
Juniata	H W. Fisher, 611 Washington Ave., Mifflintown		176
Lackawanna	F. E. Jenkins, Layton Road, Chinchilla		367R3
Lancaster	J. M. Haverstick, 741 College Ave., Lancaster		5540
Lawrence	F. L. Coen, R. No. 5, New Castle		5211
Lebanon	Philip H. Melching, 409 Gannon St., Lebanon		681
Lehigh	Wm. A Moyer, 25 N. 18th St., Allentown		2-6739
Luzerne	Samuel K. Weigel, 75 E. Bennett St., Kingston		7-5382
Lycoming	F. F. Crosby, 1442 Memorial Ave., Williamsport		2-7313
McKean	Wm. J. Carpenter, Anderson St., Mt. Jewett		2521
Mercer	Duane E. Lettie, 113 W. Market St., Mercer		6
Mifflin	R. E. McCoy, 317 Logan St., Lewistown		2916
Monroe	A. N. Frantz, 75 Elk St., E. Stroudsburg		1272
Montgomery	Ambrose Gerhart, 141 Central Ave., Souderton		873
Montour	B. P. Yeager, 66 Queen St., Northumberland		1210
Northampton	M. D. Stewart, 1535 Northampton St., Easton		2-2023
Northumberland	B. P. Yeager, 66 Queen St., Northumberland		1210
Perry	H. H. Groninger, New Bloomfield		80
Philadelphia	E. W. Stucke, 7806 Verree Ave., Phila.	Pilgrim	4813
Pike	J. H. Lohmann, High St., Milford		240
Potter	A. G. Logue, 107 W. First St., Coudersport		278
Schuylkill	John Spencer, Orwigsburg		
Snyder	C. F. Walker, Beavertown		16R31
Somerset	J. S. Shuler, 354 W. Garrett St., Somerset		
Sullivan	R. E. Latimer, Muncy Valley		15R2
Susquehanna	W. D. Denton, New Milford		16
Tioga	L. H. Wood, 3 Eberenz St., Wellsboro		196R
Union	F. S. Fisher, 400 Green St., Mifflinburg		6257
Venango	W. T. Campbell, 523 Liberty St., Franklin		1107
Warren	George L. Norris, 1007 Conewango Ave., Warren		2939
Washington	C. C. Stainbrook, 52 Harrison St., Washington		566
Wayne	M. R. Miller, 30 Stanton St., Honesdale		673
Westmoreland	R. D. Reed, (Actg.) 1610 Ligonier St., Latrobe		1140W
Wyoming	Albert A. Wargo, 161 E. Tioga St., Tunkhannock		3671
York	A. C. Ganster, 520 Girard Ave., York		7434

Space does not permit listing the Game Protectors on special assignment, those in charge of Land Management, and the large corps of Deputy Game Protectors.

PLEASE REFER TO INSIDE OF COVER FOR ADDRESSES OF FIELD DIVISION SUPERVISORS.

DON'T MAIM!
kill outright

PENNSYLVANIA GAME NEWS

DECEMBER 1940 TEN CENTS

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★

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Material for each issue should be submitted not later than the FIRST OF EACH PRECEDING MONTH.

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VOL. XI, No. 9

EDITORIAL

DECEMBER 1940

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★

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By Seth Gordon

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By Nelson E. Slaybaugh

★

METHODS AND OPINIONS
By Robert H. Mumma

★

Cover by
Jacob B. Abbott

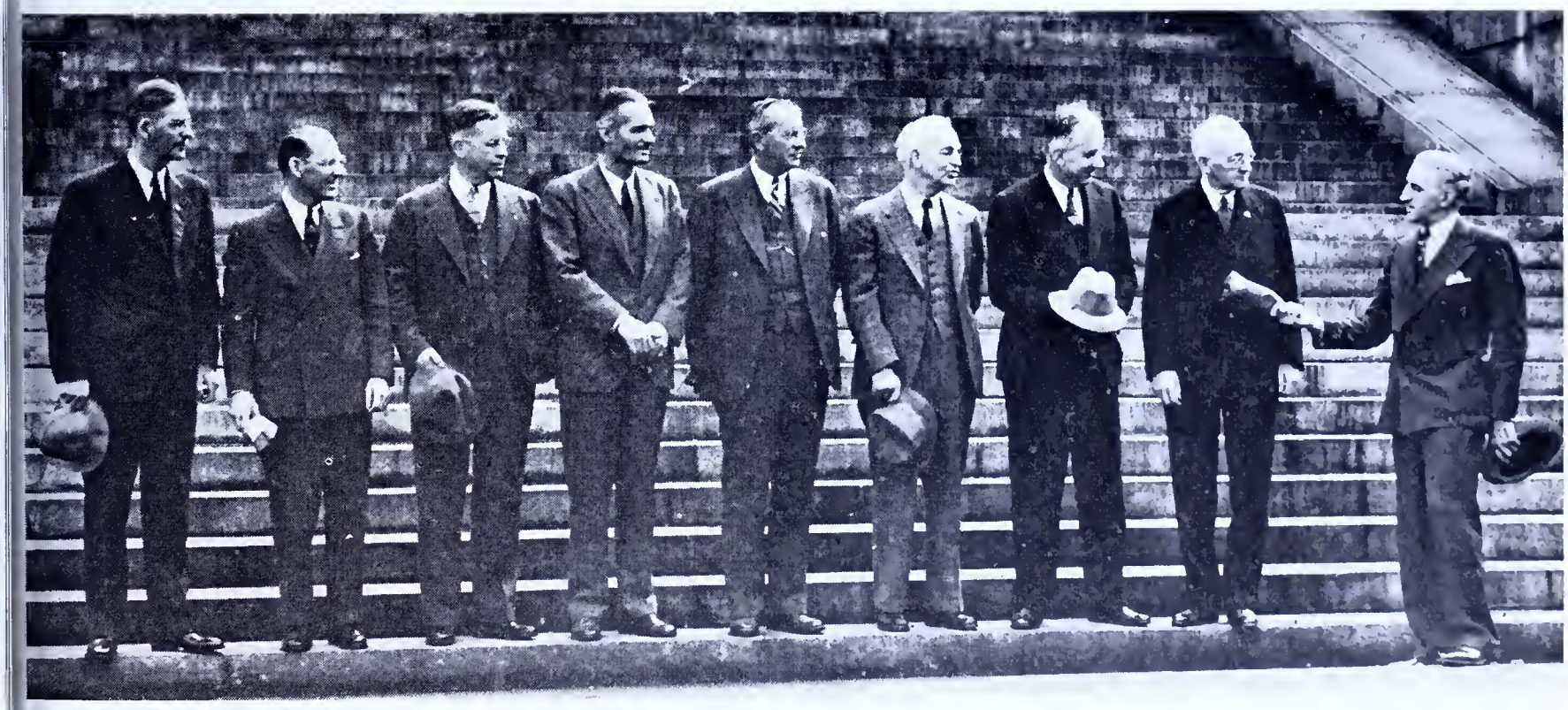
"Look Before You Shoot! Save a Fine; Save a Life"

THIS SLOGAN, adopted from the poster on the back cover of this issue, speaks for itself. It is a slogan, or rather a warning, that every deer hunter should observe without fail before he throws his gun to his shoulder. When the Commission declared a statewide combination deer season this year, some hunters said that human life would be jeopardized, others that the herd would be wiped out.

The matter of human life and its safety depends upon the individual hunter, and for that reason the Commission felt duty bound not to throw the season **wide open,** as is commonly alleged by those opposed to the statewide season on bucks and does. It declared spike bucks illegal, thus requiring a hunter to be just as careful while hunting both sexes as if he were hunting only one. In other words, to obey the law he must look before he shoots if he wants to know whether it is a buck with two or more points to the antler, or whether it is a deer with no visible antlers. The "spike buck" is the **safety valve** upon which every hunter will have to depend if he's a **careful,** law-abiding hunter. The Commission is constantly exerting every effort to safeguard the hunter. If he uses diligent care while hunting he will not jeopardize the life of any fellow hunter.

There is absolutely no danger of exterminating the deer herd. Even if every one of the two hundred fifty thousand sportsmen who hunt deer should be successful in bagging one this season it would not seriously deplete the herd, unless there is a needless concentration of hunters in a few areas, or they wholly ignore the Commission's request to devote their efforts to sections where deer are known to be too abundant — especially where they are destroying farm crops. There are plenty of deer in Pennsylvania today, many of them where there should be none.

They need to be thinned out and the Commission feels that this can be done easily and efficiently if every hunter looks upon it as a duty and goes about it in a business-like way. If they regard the season as a signal to go forth and blast at everything they see, they will be hindering rather than helping their own cause. A lot of good sport can be enjoyed during the coming deer season if hunters will regard it in the form of a definite attempt to make their future deer hunting, and that of the still larger army of small game hunters, not only **better,** but **safer.**



To further emphasize their campaign to make hunters more safety conscious, members of the Game Commission unanimously agreed at a recent meeting to wear bright red hats during the small and large game seasons this year. In the above picture Commission members are being personally presented with these hats by Executive Director Seth Gordon. Reading from left to right: William G. Fluke, Saxton; A. W. Lee, Jr., Clearfield; R. Lamberton, Franklin; Col. Nicholas Biddle, Philadelphia; John H. Price, Vice-President, Scranton; Samuel C. Castner, Williamsport; Ross L. Leffler, President, McKeesport; and Frank R. Foster, Phoenixville.

Photo by Dr. Chas. S. Apgar

North Ramp over North Mountain looking Northwest over Muncy Valley, Sullivan County.

What Do You Do With Your Deer Skins?

By Ross L. Leffler*

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SPORTSMEN of the State can contribute much to the National Defense program if they will have their deer skins tanned and turn them over to the Boy Scouts to be made into money belts for draftees or members of the National Guard. A similar program is already operating successfully in Canada where the Boy Scouts are making many useful articles for the soldiers.

At its meeting on October 24, the Game Commission enthusiastically approved and recommended a program comparative in many respects to the Canadian set-up, and this program has been endorsed by Dr. James E. West, Chief Scout Executive of the Boy Scouts of America, and a statement from him assures us that the National Office can be counted upon to cooperate as far as possible. Mr. Paul Love, Regional Scout Executive at Philadelphia, also endorsed "this very interesting and timely project and opportunity for promoting this cooperative relationship between the Boy Scouts of America and the sportsmen of Pennsylvania as outlined by Mr Ross L. Leffler, President of the Pennsylvania Game Commission, who also serves as Chairman of the Camping and Activities Committee of Region Three, Boy Scouts of America, comprised of the States of Pennsylvania, Virginia, Maryland, Delaware and the District of Columbia."

The management and success of the program naturally rest with the sportsmen, but by way of suggestion I believe that the logical and most satisfactory method of carrying on such an undertaking would be for sportsmen's organizations to contact their local Scout Headquarters to determine if and to what extent the troops in their communities would utilize tanned hides.

There are 39 chartered Scout Councils in Pennsylvania, and these Councils comprise more than 3,168 Scout Troops with a total membership of 75,239 Scouts. Mr. Love, in further commenting on the program said that he "felt confident the Scout Executives will welcome the opportunity to promote this project through the troops in their respective councils, and it is certain that the Scoutmasters of these troops will take pleasure and pride in the making of money belts for the men in the military service from tanned deer hides furnished by the sportsmen who cooperate."

The Commission heartily commends such fine expressions of cooperation and will ask every sportsmen's association to contact local Boy Scout Troop leaders as quickly as possible.

At the same time we shall recommend that Troop leaders get in touch with the secretaries of local sportsmen's associations to determine the best plans for handling the skins in their particular communities. Naturally it is much cheaper to have them tanned in bulk, and again by way of suggestion I would recommend that members of the sportsmen's organizations who kill deer arrange to salt well and deliver the hides at a central point where they can be packed and shipped in bulk to some reliable tannery, furrier or taxidermist. It should not cost much to have them tanned in quantity, and in all probability prices as low as $1.50 in lots of 50 or more could be secured for tanning the hides into buckskin. Leathercraft is one of the Merit Badge subjects for Boy Scouts, consequently it goes without saying that a number, perhaps many of them, will be interested.

A list of the various Scout Councils in the Commonwealth is as follows: Altoona, Lewistown, Bethlehem, Bradford, Butler, Peckville, Berwick, Philadelphia (Valley Forge), Erie, DuBois, Easton, Greensburg, Harrisburg, Homestead, Indiana, Johnstown, Lancaster, New Castle, McKeesport, Philadelphia, Pottsville, Pittsburgh, Reading, Scranton, Sharon, Milton, Oil City, Warren, West Chester, Wilkinsburg, Wilkes Barre, Williamsport, York, Lebanon, Washington, Allentown, Doylestown, Troy and the Philadelphia Area.

Mr. Ross L. Leffler presents in this article a real opportunity for members of the Boy Scouts of America to do an outstanding Good Turn which involves the utilization of Scouting skill. Men who, in response to their country's call in developments related to national defense, will be in service as draftees or members of the National Guard, will appreciate not only the kindly consideration, but also the practical value of useful articles made by Scouts as suggested in this article.

It is with pleasure that, after full investigation of all that is involved, I endorse this project and urge Scouts as individuals and as Patrols and Troops to participate as requested and indeed, where opportunity occurs, to volunteer to undertake the carrying out of these projects for which they are qualified.

JAMES E. WEST,
Chief Scout Executive.

While this program is suggested primarily as a sportsman-Boy Scout cooperative movement, there are no doubt some hunters who will want to have deer skins tanned for their own use. There are many articles of value both to the sportsmen and Boy Scouts which can be made out of buckskin. In addition to the things which can be made for soldiers, articles such as sandals, belts, knife and axe sheaths, archery equipment, dog collars, card cases, billfolds, pillow covers, book marks, covers for photograph albums, scrap books, handbags, table covers, pouches for various small hunting accessories—all sorts of useful items can be fashioned with comparatively little experience from a well tanned deer hide.

One of the handiest little guides for making various items out of leather is published by the Boy Scouts of America. It is called "Projects in Leather", and can probably be secured from your local Scout headquarters or direct from National Office at No. 2 Park Avenue, New York City. It sells for only 25c.

In some cases certain individuals might be interested in tanning their own deer skins, and for the benefit of those so interested Game News secured permission from Field & Stream to reprint the following article on "Tanning Luckskin" by Glenn R. Vernam. We greatly appreciate this courtesy on the part of Field & Stream magazine and trust the article will encourage many persons to engage in an interesting and inexpensive hobby with such a worthy cause in mind.

*President, Pennsylvania Game Commission.

TANNING BUCKSKIN

By Glenn R. Vernam

IF all the deer hides thrown away each hunting season were placed end to end, they would cover a strip reaching somewhere out beyond the horizon. Hundreds of pounds of beautiful leather are allowed to rot every year, even though this buckskin is unexcelled for use in so many ways—for making gloves, jackets and moccasins, upholstering furniture, covering cushions, binding books and working up into a hundred and one different kinds of leathercraft. And this waste is usually simply because the owner considers commercial tanning too expensive and successful home tanning impossible. Neither happens to be true.

Also, Mr. Average Man is inclined to think there is some deep, unfanthomable secret about leather making, and that it is a filthy, disagreeable task. This, too, is a mistake. Almost any able-bodied person can tan buckskin. It is one of the easiest of hides to tan; and outside of the preliminary cleaning and fleshing there is nothing particularly disagreeable about it. Nor are expensive tools needed. All the implements that are necessary can usually be found around home. A graining beam and a hide stake are the two most essential things. Any handy man can make them.

The best material for the beam (Fig. 1) is half of a smooth log, 6 or 8 feet long by 16 to 24 inches wide. However, a piece of thick plank rounded off on the upper side will do. Even some inch boards nailed together will serve in a pinch. Install some well-braced 36-inch legs under one end. The other end rests on the ground as illustrated here.

Figure 3 shows the hide stake. The base is a 1-inch board 3 or 4 feet long. The upright stake is a 1-inch by 6-inch board 36 inches long, rounded off and shaved wedge-shaped to a fairly sharp edge on the upper end. It must be well nailed and braced. It will need resharpening occasionally while in use.

Other necessities are a drawknife, or a long, heavy butcher knife with the point driven into a block of wood, to provide a handle on each end. (See Fig. 2.) A regular tanner's knife is better, but those shown will serve nicely. Then you need a wooden tub or barrel large enough to contain the hide and six or eight gallons of water. Ample roominess is an advantage.

(Continued on page 30)

MARCHING FORWARD

By Seth Gordon

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The Cooperative Farm-Game Program was expanded.

ANOTHER biennium came to an end several months ago, and the time for presenting the major accomplishments of the Commission during that two-year period has arrived. I have just read all of the reports of the various Staff heads relative to the progress made in their respective divisions, and it is no wonder that the number and scope of the activities engaged in surprise even those of us who serve as administrators of the Commission's program.

We have marched forward, but we could not have done so without the wholehearted cooperation of every employee in the department, of the sportsmen, of the landowners throughout the Commonwealth, of the various federal relief and other cooperating agencies, and of many other organizations and individuals whose chief interest is the restoration and perpetuation of our wildlife resources.

To the end, therefore, that all who participated in the program of the Commission during the past two years may have an opportunity to learn more about the programs to which they contributed, prior to the availability of the published Report of the Commission, the major accomplishments are hereinafter briefly summarized.

Lands Acquired

State Game Lands were increased by over 53,000 acres. Contracts for over 68,000 acres were entered into but it was not possible to consummate all of them during the biennium. More than half of them, distributed in 34 counties, were consummated, however, bringing the Commission's holdings up to 636,680 acres. Contracts totalling 38,000 acres were pending at the end of the biennium.

Pennsylvania's allocations under the Federal Aid in Wildlife Act amounted to $46,025.99 in 1938 and $71,366.13 in 1939. From these two amounts a total of $96,767.12 was allocated for the acquisition of State Game Lands, which covered three-fourths of the total cost of 27,295 acres, including the price paid for the lands, surveys of boundary lines, title abstracting and conveyancing. The other one-fourth of the cost was paid from the Game Fund. Titles to such lands are vested in the Commonwealth for use of the Game Commission, which has full control over them and their management and administration.

Auxiliary Refuge Projects

Agreements were entered into for twenty-two auxiliary game refuge projects, comprising 14,232 acres, of which 2,529 acres were set apart as refuge areas. The aggregate area of this type of project at the end of the biennium was 54,584 acres, of which 14,212 acres were in game refuges.

Game Propagating Areas

Thirty-nine special State Game Propagation Areas, comprising over 10,052 acres, wherein certain species of wildlife may breed and propagate under natural conditions, and wherein they may not be hunted, molested or killed at any time, were arranged for. The total of such areas at the end of the biennium numbered 75, aggregating 26,948 acres.

Cooperative Farm-Game Program

The Cooperative Farm-Game Program inaugurated in 1936 for the purpose of improving hunting conditions in the more extensively cultivated and thickly populated sections of the State was expanded from the eight agricultural counties in which the plan was originally operative to 27 counties as follows: Chester, Delaware, Philadelphia, Montgomery, Bucks, Lancaster, Lebanon, Northampton, Lehigh, Berks, the southern half of Dauphin, Cumberland, York and Adams counties in the eastern part of the State, and Greene, Fayette, Washington, Westmoreland, Indiana, Armstrong, Butler, Allegheny, Beaver, Lawrence, Mercer, Crawford and Erie counties in the western part of the State.

Agreements vesting the hunting rights for their properties in the Commission were secured from 1,095 landowners. These agreements covered a total area of 87,871 acres which were additions to 29 old projects and the creation of 43 new ones. At the end of the biennium 84 projects, containing 135,551 acres in 1,636 farms with suitable small refuges were established and functioning.

Pheasants held for spring liberation.

A Review of the Commission's Progress during the Past Biennium

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Special Wildlife Projects

An act of the 1939 Legislature provided for the creation of Special Wildlife Projects to be established and maintained by any regular sportsmen's organization, as long as that association obtains by formal agreement the written consent and approval of the owner or lessee of the land, to cooperate with the Commission in furthering its game management program. During the biennium 29 projects of this kind were signed up and established in 20 different counties. They aggregated 17,458 acres with 34 refuges totalling 2,570 acres and 38 safety zones comprising 378 acres; 14,510 acres were open to public hunting. All of these projects were established and ready for use by the fall of 1939, and by spring 6 new projects totalling more than 500 acres were added.

At the end of the year a questionnaire was mailed to the different clubs that sponsored projects in 1939, and from the returns, about 70%, it was learned that about one-half of the clubs planned to expand present projects and also establish new ones. All of the lessors agreed to allow fencerows, stream banks, etc., to grow and to cooperate with the organizations in planting grains, trees and shrubs. No violations of the refuges or safety zones were reported. Nearly all of the organizations carried out systematic winter feeding campaigns. In general the program received only the highest praise.

Food and Cover Development

The Commission undertook the biggest game-food and cover planting job during the past two years that was ever attempted. Over 2,500,000 evergreen seedlings were planted mostly in clumps or strips. These seedlings were received through the cooperation of the Department of Forests and Waters.

Over 1,600,000 game-food producting trees, shrubs and vines raised in nurseries also were planted. A large quantity of these were received through the courtesy of the U. S. Soil Conservation Service, the remainder being raised in the Commission's nursery and in the State forest nurseries. Approximately 150,000 game-food producing trees, shrubs and vines were transferred locally by field men from places where they were plentiful of from locations where they would be destroyed to State Game Lands.

Over 291,000 cuttings of game-food producing plants were set out on State Game Lands and refuges. This work was done largely with the assistance of the W. P. A. and the N. Y. A. Through the cooperation of the Department of Forests and Waters an area was set aside adjacent to a State Forest nursery at Clearfield to raise food-producing trees, shrubs and vines for planting on State Game Lands, game refuges and propagating areas. This area is a new addition to the Clearfield nursery and was established by relief agencies.

Sixteen tons of food-plot mixture were planted.

Production of Quail was increased.

Food Plot Mixture

Sixteen tons of the Pennsylvania Game Food Plot Mixture were planted, mostly by interested sportsmen. A total of 1,286 game-food plots for increasing the food supply were established on State Game Lands. Furthermore, arrangements were made for the planting of more than 1,000 acres of State Game Lands by neighboring farmers on a share basis. In addition to the material left standing for game-food, the Commission received as its share about 4,000 bushels of grain each year, all of which was used for winter feeding. An additional 4,000 bushels of grain was raised each year by game land managers on the Game Lands and on the Pymatuning Refuge. This, too, was used for emergency winter feeding.

Erect Fences

Approximately 27 miles of sturdy worm fence were erected by W. P. A. on State Game Lands to break up into smaller units the larger open fields. Shrubs and vines were planted alongside of them. This will increase the wildlife carrying capacity of these areas and furnish desirable travel lanes. Thousands of feeding shelters and other artificial shelters and retreats were constructed in sections where the natural cover was insufficient and where it will take some time to produce protective cover naturally.

Improvement Cuttings

The Commission continued its timber cutting operations to improve wildlife conditions; wherever possible these cuttings were made for wood sales. Pulp wood, mine props, cord wood and in some cases saw timber were sold from areas where it was necessary or desirable to make openings for wildlife. A total of $13,812 was received from wood sales during the biennium. In all cases cuttings were made under definite regulations including a provision that sufficient **game-food trees and den trees** must be left standing.

Thinning Operations

Thinning operations were also conducted on thousands of acres, thus opening the

(Please turn page)

crown canopy of the trees and resulting in an increased growth of vines, shrubs and herbaceous ground cover to improve the habitat for all forest game species.

Release Cuttings

Release cuttings were carried on around clumps of game-food producing plants such as apple, hawthorn, blackberry, wild grape, dogwood, beech, viburnum, and others to provide a large part of the fall and winter foods for many kinds of wildlife. More than 90,000 acres of release cuttings were made with W. P. A., C. C. C., and N. Y. A. assistance. These cuttings remove all competitive growth and permit sunlight to enter and stimulate the game-food plants and thus increase their fruiting capacity.

Forest-Wildlife Relations

During the spring of 1940 a major project under the Federal Aid in Wildlife Program was started for the purpose of making a detailed study of forest and wildlife relations. This project is designed to collect more facts relative to the value of cuttings for wildlife and the effect of forest fire on wildlife and wildlife food supplies.

Apple Pomace Distributed

A total of over 63,000 apple and other fruit trees were pruned in various tracts of State Game Lands with the help of relief agencies, the pruned branches being piled as food for rabbits and deer. This pruning and releasing of suppression increased the fruiting capacity of the apple trees, which furnish food for practically all kinds of wildlife.

In the fall of 1939 for the first time a special effort was made to have apple pomace from cider mills hauled to the woods and placed in large piles for game-food. More than 300 tons were distributed by field employees with the help of sportsmen's organizations and the National Youth Administration. In addition, more than 1200 bushels of cull apples furnished by orchardists were hauled to the woods for game food by Commission employees. Observations disclosed the fact that the pomace was extensively eaten by deer, rabbits, grouse, wild turkeys, squirrels, and that even bears visited the piles.

Pymatuning Museum and Refuge

Considerable development work was done on both the land and water areas of the Pymatuning Waterfowl Refuge. As a result it has become one of the finest waterfowl resting, nesting and feeding areas in the East. Each year approximately 75 acres of grain are planted from which about 1,000 bushels are harvested for feeding waterfowl during migrations, and for feeding wildlife in northwestern Pennsylvania in winter. Also, about 25 acres of grain are left standing as food for waterfowl.

More than 70,000 shrubs, vines and trees were planted by the W. P. A. using primarily those species which will furnish wildlife food and cover. Approximately one-fourth of these seedlings were transferred from other areas in the vicinity. The following aquatics were planted on the refuge and the main dam during the biennium, practically all of which were gathered from other water areas nearby with no cost to the Commission except transportation and the supervision of lifting and planting: 589,500 wild celery plants; 44,700 sagopond weed plants; 69,000 floating Pondweed plants; 15,400 Northern Naiad plants; 7,200 pickerelweed plants; 254 bushels of coon-tail plants; 280 pounds bur reed seeds; 2,000 sweet flag roots; 134 bushels of musk grass seed spores; 6 bushels of duckweed; 10,000 wapatoduck potato bulbs; 3 bushels of duck meal, 12 bushels of wampee seed; 300 pounds of wild millet seed; and 175 pounds of smartweed seed.

More public shooting grounds were acquired in small game territory.

Main Refuge System Expanded

The expansion and improvement of the main refuge system was also continued during the biennium. A number of small refuges were established for the protection of small game species. A few of the older and larger refuges were reduced in size, and smaller ones established in the same general territory for the purpose of giving more protection to a larger variety of wildlife. Thirty primary and thirty-five auxiliary refuges were established. Nine refuges were reduced in size, and five were abandoned.

Maintenance Program

With the increase of the area of State Game Lands and the number of refuges the maintenance problem was proportionately enlarged. The Commission, for instance, owned at the end of the biennium 636,680 acres of State Game Lands, (1191 refuges including those on Cooperative Farm-Grove Projects,) 75 wild propagating areas (exclusive of wild turkey propagating areas,) 84 Cooperative Farm-Game Projects, comprising 135,551 acres, 4 dog training preserves, and 2 archery preserves.

These land units require each year the maintenance of approximately 1600 miles of wire line around the refuges, propagating areas and special preserves. Each year these lines are mowed ,and signs and posters renewed. Also, new wire is put up where needed. Nearly 3,000 miles of outside boundary line on State Game Lands must be maintained. These lines are kept tagged and marked, many of them are brushed out for

Food plot alongside wild turkey area in Bedford County.

Additional wild turkey propagating areas were established.

ire protection. Several hundred miles of rails and road are also maintained for administration and protection.

In maintaining the land and planting food and cover for restoration purposes advantage was taken of the opportunities furnished by the various relief agencies to accomplish as much as possible in land refuge improvements at a minimum cost. Fifty-nine W. P. A. projects were completed during the biennium. This brings the number of completed projects sponsored by the Commission since the start of the W. P. A. program to 125, for which the W. P. A. provided nearly two million dollars of Federal funds.

At the end of the two-year-period there were 34 active W. P. A. projects employing a daily total of between 1400 and 1800 men. National Youth Administration projects also were approved for work on State Game Lands and refuges, providing a total of 194,760 man-hours of labor. This made it possible greatly to improve living conditions for wildlife on many areas. During the legislative session of 1939 an act was passed requiring those on direct relief to work for grants wherever physically able and where useful projects could be found. The Commission provided a number of such projects and for these activities the Department of Public Assistance furnished 18,476 man-hours of labor.

The Commission still has two C. C. C. camps, and these are being used to develop the Game Lands in the best manner possible for wildlife and the production of timber. During the biennium the two camps completed 13 miles and maintained 50 miles of road, built 27 miles of trails, completed one dam, and partially completed the second. They planted and transplanted 300,000 trees, shrubs and vines, made 6,000 acres of thinnings to improve conditions for wildlife, improved 22 miles of streams and carried on miscellaneous other projects.

During the hunting season of 1938 an estimated 20,767 hunters spent 41,534 days on the 59 Cooperative Farm-Game Projects, totalling 73,825 acres during that hunting season. It is estimated that 73,034 pieces of game were killed on these projects, which is approximately one piece per project acre. During 1939 an estimated 41,000 persons hunted on the 83 Cooperative Farm-Game Projects then operative and totalling 131,467 acres, and the kill averaged about one piece for every 1.5 acres. During 1938, 9,360 pieces of game were released on the projects and during 1939 a total of 8,112 pieces were so liberated.

More than 125 acres of game-food plots were either purchased or planted in small areas on these Farm-Game Projects each year of the biennium. The plots were small in size, and well scattered in order to offer maximum benefits on the projects. During the hunting season Deputy Game Protectors were employed to patrol the projects.

Law Enforcement

Enforcement of the Game Law continued to play a major part in the Commission's program, and 9,489 prosecutions were brought during the biennium. Penalties collected amounted to $159,481.90. The Commission also revoked 723 hunting licenses. This is the most severe punishment that can be inflicted and usually promotes better law observance than any other penalty.

Game Feeding

The largest winter feeding program since the disastrous winter of 1935-36 was carried on from late fall of 1939 to early spring of 1940. Over $17,000 were spent during the biennium, approximately $10,000 of which was used during 1939-40. Sportsmen, farmers, Boy Scouts, rural mail carriers and other interested individuals are to be highly commended for the assistance they rendered. As a result of their cooperation thousands of quail, ringneck pheasants, wild turkeys and grouse were brought safely through the winter.

Deer Damage

There was considerable damage to farm crops and fruit orchards by deer during the biennium, and landowners killed 5,409 of these animals to obtain some measure of relief. Deer were killed as a protection to property in 50 of the 67 counties, a clear indication that the herd has increased far beyond its normal range and food supply. Many landowners also erected deer proof fences, and the Commission spent every cent of its $10,000 ear-marked appropriation for this purpose. Bears also caused considerable damage to livestock, poultry and bees, but it was necessary to spend only about half of the $3,000 ear-marked appropriation for such damage. During the two-year period bears killed 173 sheep, 6 hogs, 81 chickens, 3 heifers and destroyed 59 bee hives.

Training

No student classes were held during the biennium but an in-service training program including nine refresher classes, a school for

(Continued on page 26)

The Commission's major exhibits attracted thousands of persons.

DEER

(Reprinted courtesy The American Rifleman)

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Deer's right fore leg is reaching far forward. Circle 1, for heart area; 2, for high shot to break both shoulder blades; 3, for "hip shot" to reach pelvis; 4, for brain shot

EVERY fall around the evening fires in the deer camps the old question has come up as to how it is possible for a deer to run from fifty to two hundred yards after his heart has been perforated by a bullet. We all know he does this but to date no answer has really explained how. We usually wound up the evening in agreement on but two points: (1) The deer should drop when circulation ceases and the brain "suffocates." This should happen almost immediately after the heart is perforated, for, of course, it is taken for granted the heart stops instantly. (2) As we know deer have run two hundred yards after a heart shot this explanation cannot be true and there is something phoney about it somewhere. So the question has never been logically answered as far as the deer hunters are concerned.

Then, on October 31, 1938, murderer John W. Deering was placed before a stone wall in the Utah State Prison with an electrocardiograph attached to his person. He was outwardly calm. The prison doctor placed a target over his heart. Five picked riflemen fired at that target at short range and four bullets simultaneously pierced his heart. Yet Deering's heart **did not stop when pierced by four bullets** but continued to beat for 15.6 seconds thereafter. The cardiograph record also showed that a few moments before the shots were fired, through fear, Deering's heart beats, normally 72 per minute, were increased to 180 per minute.

Now, I cannot say that the effect of a heart shot on a deer and a man are in any way similar. But let us see what would happen if we suppose this might have a bearing on the deer question. If the deer is frightened **before** the shot, his heart beats would increase tremendously, also increasing circulation of blood to the brain and muscles. And how far would he run in the 15.6 seconds before his heart stopped? At Anticosti Island I timed a mature whitetailed deer over a measured course with a stop watch. It was shot at but purposely missed. Its speed was 18 miles per hour. The highest speed when another deer was fully extended and **had** to

Heart, showing different angle with deer much above the usual sight line

run, was about 30 miles per hour. At 18 miles per hour, the deer could travel 137 yards in 15.6 seconds. At 25 miles per hour the deer could travel about 152 yards. At 30 miles per hour the deer could travel about 229 yards. Doesn't it sound to you a little bit as if John Deering may have solved the riddle and that the deer's heart does **not** stop when perforated?

At first glance the execution of John Deering in a Utah prison may seem a long jump from bagging a buck in Washington County, Maine. But actually there is a very direct connection. For you have to answer now the very definite question, Do you want the deer to run and can you find him if he **does** run and drop dead an eighth of a mile away? In some countries it doesn't matter. You can track the deer easily. In open country you can see him fall. In other countries where there is much brush and ground cover you can very easily lose the deer because a deer doesn't leave a large deep track like a moose and is more apt to dodge and circle. Also your decision will depend somewhat on your rifle. If you are using a very light weight bullet of ultra high speed, that bullet while very deadly is apt to break up inside the deer, leaving no exit hole and practically no blood trail. If, on the other hand, you are using an old-fashioned cartridge like the .38-55 H.V. the bullet is apt to expand, go clear through the deer and leave an excellent blood trail, so you can afford to have the deer run, with little danger of loosing him.

On one occasion I remember coming to an old blow down of big trees. On the edge of it were very fresh tracks of a nice deer going directly into it, obviously for the good feed of the ground cover that had sprung up when the old forest shade was removed. However, the deer was but three feet high at the shoulder and he could go under these down trees quite easily. Being six feet high I could not. So I mounted the logs and had gone but 50 feet, when through an opening I saw him. He was broadside and his head was down, feeding. It was instantly obvious to me that I could not use a heart shot here. If he ran 100 yards farther into that mess I'd be a week getting him out. So I fired at his clearly defined shoulder blades, well forward and high up. He dropped instantly, because the heavy bullet carried through both shoulder blades, and, of course in so doing, broke down the power of locomotion.

One fall when I was hunting deer in Canada with Dr. Roy Chapman Andrews he told me that on all his expeditions it was not only his job to collect specimens for the American Museum of Natural History

Deer standing on slight quartering angle. A shot to the circle at "sticking" point should reach vital heart area. Oblong area marked above covers lungs or neck vertebrae

SHOTS

By William Monypeny Newsom

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but also to supply meat for a big crew of men. He was certain he had killed over a thousand head of game, and of the many he had shot through the heart he could remember but two animals that had dropped to the shot. For this reason, his favorite shot is to break the power of locomotion with the high shoulder shot, where the animal is standing exactly broadside. The real danger of this shot, however, is that the position of the deer may be misleading,—that he may not be true broadside or at right angles to you, but actually at a 45° angle. In this case you may hit the near fore shoulder blade and miss the one on the far side. If this happens you may have a long chase, as the entire motive power of the deer is in the hind legs, the fore legs being used to land on. And the deer handles himself surprisingly well with one bad fore leg, which is by no means as serious as a broken hind leg.

Many hunters I've met seem to take little interest in placing the first shot properly. Having a magazine full of cartridges they foolishly believe the second, third or fourth shot will be just as deadly. This is by no means true. Of course the first shot is obviously the most likely to succeed, but leave that out altogether. It has been observed time and again, especially by African hunters who killed tons of game, that where the first shot is not a deadly, paralyzing shot, you can thereafter literally fill the game with lead and it seems to have no apparent effect. The first shot, if not effective, seems to deaden the nerves, so the following ones are not felt as they should be. Therefore I believe you have a better chance if you actually miss the first shot and the second is deadly, than you would have were you to wound slightly on the first shot, with a deadly second one

Heart shot and spine shot

Hold low in the circle to strike the pelvis, the kidneys, or spine, as the case may be

Heart shot and neck shot

I saw an excellent case of that one morning in the back country of Maine years ago. I was in camp and my companion was in the low ground only a short distance away with a .33 Winchester, when he jumped a scraggly old buck. He only wounded it on the first shot, that went high and missed the bony structure of the shoulder. Thereafter the battle started. Every few minutes my friend would fire another burst. Several times they chased each other around the swamp, with constant intermittent firing. By the time he had fired a hatful of cartridges I began to wonder if he was chasing the deer, or the deer perhaps was chasing him. When I was beginning to chuckle out loud he came puffing into camp.

"Didn't you hear me shooting?" he said, somewhat exasperated.

"I thought I **did** hear a shot." I said casually. "Were you shooting?"

"Was I?" he exploded. "I've been shooting for ages. I'm all worn out pumping lead into him. Why the devil didn't you come and help me?"

"Why," I said, "I thought you only had one buck to shoot at."

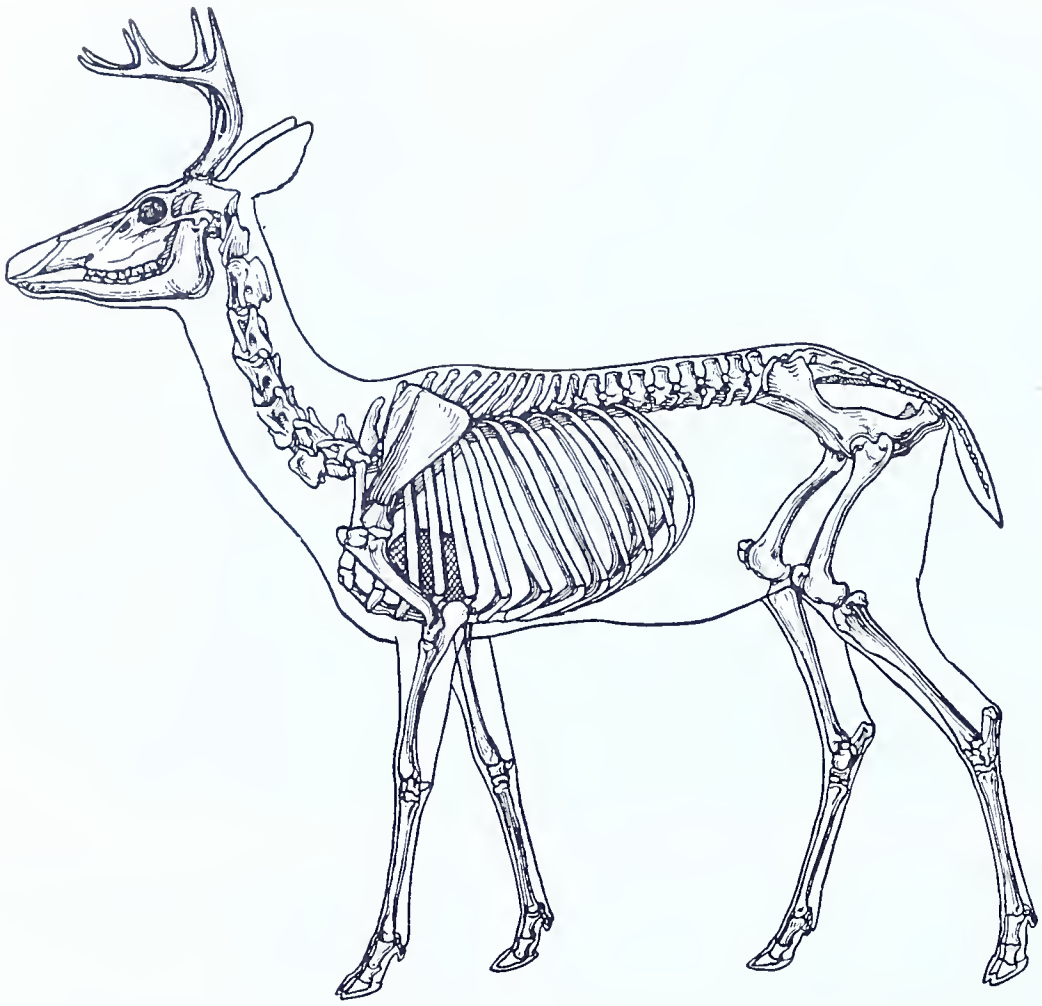
"One buck or what's left of him. Come over and look at the wreck."

I went. The buck had been very nearly shot to pieces, hit nine times and nearly every one of these shots would have been deadly at once if the first shot had not apparently made the buck insensible to future shock. And certainly that was no fault of the .33 cartridge, as it has not only shocking effect but plenty of ability to penetrate clear through, and leave a blood trail.

Here let me remind you of an important item I have never seen in print that has to do with this same question of various shots and a blood trail: It is usually customary to compare thoughtlessly the size of bullet holes by referring to the diameter of the bullet. That is, a .45 caliber bullet is one-third larger than a .30 caliber bullet. This seems to be standard practice among hunters, but is obviously wrong. For the bullet should be compared by **area**, not by **diameter**, and the .45 is not one-third larger but actually twice as large as a .30 caliber. This is the same as figuring pipe where we all know the volume of water through a 4-inch pipe will fill sixteen 1-inch pipes or four 2-inch pipes. This, of course, is directly connected with the amount of blood trail you can expect from the hole made by the bullet.

I hope that in the foregoing I have made clear what you can expect from various shots in a general way; that you need to know all the different countries, different conditions, and different rifles used; and that the same shot under different conditions does not always produce the same effect. Now let us take up more specific cases as to where the bullets should be placed.

We can divide the shots into two classes: those affecting the vital organs, and those paralyzing the power of locomotion. Let's begin at the head.



Skeleton drawing, also showing heart area. Note formation of shoulder and fore leg

The brain shot, while instantly fatal, should never be used where it can possibly be avoided. It is a surprisingly tricky shot at a small target. In actual field practice it is hard to locate because of the length of the deer's nose the length of his ears, and the fact that the head is moved so constantly. A slight variation in proper aim may do the deer a frightful injury without your bagging him. If you must shoot for the brain, you'll find it just under the horns between the eye and the ear. It is far better to try for the neck vertebrae, if you cannot see the deer's body. Many hunters fail in this shot because they think of the neck as draped on the bones like a curtain on a curtain pole. Actually they shoot too high. The neck bones are about center of the neck itself, so shoot for the center of the neck, not at the top edge. It is of course a deadly and instantaneous shot where the vertebrae are struck but where the bone is not hit the deer will probably run away to recover—providing the jugular vein or arteries are not cut.

As to the location of the organs in the chest cavity, that is, inside the rib structure, there has been a great deal of confusion among hunters. I found this out when I sent out a questionnaire sketch of the broad side of a deer to a selected list of guides, asking them to mark the heart area and return it to me. Out of 139 replies, 89 missed the heart area location altogether—63% wrong, among the better class of guides. This confusion is caused by the mistaken idea that the shoulder of the deer is at the point where the fore leg joins the body, and that the heart is behind this point. Actually this point is the elbow joint. The heart is "behind the shoulder" but the shoulder is much further forward. This means that with a deer standing still in normal position, the heart is directly **between the fore legs**, being very far forward in the chest cavity, and nearly at the bottom of the cavity, so it appears to be about a third of the way up the body. In a small deer the heart is three inches in diameter, in a buck you'll shoot at about four inches, but the deadly area is somewhat larger, including the large arteries at the large end of the heart. There are records of an old bullet and a small arrow head being found imbedded in the small end of a deer's heart.

Obviously, then, to hit this area if the deer is standing broadside, you should hold to hit a point about on the center line of the front leg about a third of the way up the body. This shot for the average hunter under average conditions is, I believe, the best standard shot. It can be taken for a deer running at any angle, except possibly straight away from you. For, knowing the heart location between the front legs, you can direct the shot to pass through that point regardless of where the bullet enters. While the heart is not exactly centered it is near enough so you need not worry about that.

It is, of course, utterly impossible always to place the shot correctly in a deer. Thus, the heart shot has the great added advantage that if you hold too far forward you will hit the shoulder joint, or the sholder blade

Shot to circle will pass through heart area, between fore legs. As this was photographed from below, it makes the angle slightly confusing

if you are high. As the heart is surrounded by lungs, a bit high and you still have a deadly shot, and if somewhat too far back, as is usually the case where enough lead is not taken on a running deer, you will have a deadly lung shot.

It used to be, with the old low velocity bullets, that the deer would run long distances when shot through the lungs. Modern high velocity bullets that fly to pieces with what we call the "explosive effect," however, are very deadly in a much shorter time.

The lungs. of course, take up most of the space inside of the ribs—back to the diaphragm or membrane curtain that follows the rear line of the ribs. To the rear of this we find the liver, paunch, intestines, etc. While a shot placed in this area back of the diaphragm may kill eventually, you will have a long chase as a rule, with the excellent possibility that you will never find the deer. The kidneys are in this area, high up under the back bone in the small of the back but it will be mere luck and bad shooting if you hit the kidneys unless the deer is running straight away—which we'll come to in a moment.

Another paralyzing shot that is instantly fatal is one that strikes the back bone. I have known several hunters who believe this to be the best shot. They claim they are apt to shoot high and if they hold true they kill the deer instantly. If they miss by overshooting, it's a good clean, honest miss with no cripples to chase. While this may be true enough, it's a very confusing shot to the novice. Our hunting season now comes very late, when the deer's hair is long. The deer has bony projection of varying length sticking up above the spine. Thus the spine is much further below the top line of the deer than is usually supposed. If you do not hold far enough below the top line, you are apt merely to hit one of these bony projections. If you do, the deer will probably drop instantly, momentarily paralyzed from shock to the spine. You then saunter up, stand your rifle against a tree and pull your knife. About this time, the deer comes to life, leaps to his feet and runs away practically unhurt—which so many deer have done to so many chagrined hunters.

Another shot, only to be used in emergency under special conditions, is the hip shot, aimed to strike the pelvis. Quite naturally a break in the pelvis or hip will instantly break down the whole rear end of the deer. But you must know your anatomy to make it, and you will ruin a lot of the best meat even if you pull it off successfully, although there are times in thick brush where it may be most useful.

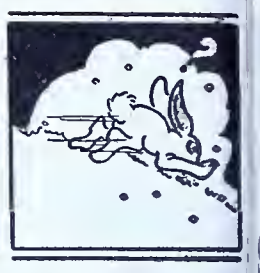
Coming now to the deer running straight away from you, it is obvious that this shot will be offered many times. It should be a comparatively easy shot. You are shooting at a large white bullseye easily centered over the rifle shots, instead of the indistinct brown-gray color of the broadside. You do not have to contend with the question of leading the deer as would be necessary with a cross-angle shot. Your only variable is the bobbing up and down motion of the deer, which you have in all other running shots anyway. But still the novice and expert all constantly miss this shot, with ninety-nine bullets out of one hundred going right over the top of the tail.

If you come to analyze this difficulty you'll find it's perfectly logical and easy to explain why this is so. The tail is waving and attracing all your attention. The country being brushy, you are apt to see the deer the clearest at the top of his bound, at which point you fire—and the deer is then coming down. On top of all this it's a snap shot and one hastily fired, which is not conducive to accuracy anyway.

The point to hit, of course, is the anus or slightly below it. A bullet in that immediate vicinity ranges forward, either breaking the pelvis which is slightly below this point, or breaking the back bone which is above it. It may range forward into the kidneys, which is deadly, or keep going, smashing the whole interior workings. While the anus is the point to hit, your very best chance to hit it is to hold very low—let's say what looks like a foot below it. That means you should hold well down into the large white circle of the rump, trying your best to disregard that exciting white flag that is waving you goodbye. If you can keep cool, not shoot too quickly, and actually aim below the anus, you will have no great trouble bagging your flying whitetail with this shot. But if you are not as cold as ice, and perfectly steady, you may as well save your cartridges.

Photo showing interior of young whitetail

SPORTSMEN'S QUERIES



By CHAS. F. STAMBAUGH

POSSESSION OF PROTECTED HAWKS; FALCONRY

Q. Under what conditions may a protected hawk be kept in captivity in Pennsylvania? Is it true that non-native birds may be kept? What is the status of falconry in Pennsylvania?

B.J.K.—Norristown, Pa.

A. The Game Commission under present policy does not permit any individuals to possess protected hawks alive, regardless of whether they were captured in Pennsylvania or another state. Even though one may have a legal bill of sale or other written authority from outside the state, he could not obtain a permit to possess a protected hawk imported into this Commonwealth. Falconry in Pennsylvania has not been legalized to date. The only hawks that may be captured and retained in captivity are those on the unprotected list, including the goshawk, the sharp-shinned hawk and the Cooper's hawk. There would be no objection to training these species of hawks to kill other unprotected birds such as English sparrows and starlings.

* * *

MORE THAN ONE ROSTER AT HUNTING CAMP

Q. Is it possible to have more than one roster at a hunting camp on State ground, during big game season? It does not suit our members to go at the same time.

J.B.F.—West Chester, Pa.

A. While it is not possible to have more than one roster at a private big game camp **at a time**, there is no objection to dividing your membership into two groups, each of which could occupy the camp at separate times and maintain separate rosters. For example, one group of six or more hunters could occupy your headquarters the first week and kill six deer, then when all of that party leaves, another group could come to your headquarters and also kill six deer, providing none of the second group had hunted deer previously that season. No individual may participate in killing more than six deer a season.

* * *

TRACKING SMALL GAME IN SNOW

Q. Is it lawful to track and kill small game in snow?

T.B.F.—West Grove, Pa.

A. Yes, during the open season. You will understand that it is unlawful to take any live, uninjured wild bird or wild animal except a predator out of its den or place of refuge, although woodchucks may be dug out of dens in cultivated fields under certain conditions.

FOOD OF GAME BIRDS; WHIP-POOR-WILL; FLYING SQUIRRELS

Q. What game birds in Pennsylvania feed chiefly on insects? What does the whip-poor-will feed on? Can a flying squirrel really fly?

C.H.M.—Perkasie, Pa.

A. Bob-white Quail, Hungarian partridges and ring-necked pheasants are the three game-bird species feeding chiefly on insects.

The whip-poor-will feeds almost entirely upon winged insects which this night-feeding bird takes while on the wing after sundown.

Flying squirrels do not actually fly, but rather "glide" from a high point on one tree to the trunk of another. The membranes of skin covered with hair between the front and hind legs of this animal act as wings enabling the squirrel to glide safely from a high point to the ground or to a low portion of another tree.

* * *

MOTOR BOAT FOR DUCK HUNTING

Q. May I use my motor boat to go across a lake or to a certain blind on a lake for duck hunting? The boat is provided with oars and I only want to use the motor to get to certain places.

W.B.Y.—Olyphant, Pa.

A. Federal Law, which has also been adopted by the State of Pennsylvania for migratory bird hunting, forbids the use of a power boat for wild waterfowl hunting and it is contrary to law to use any motor boat for such shooting. Even though the boat is propelled temporarily by hand, if it contains a motor it must be classed as a power boat and shooting from a boat of that kind for wild waterfowl cannot be permitted. However, there is no objection to using a motor boat to go to some location on water where you desire to shoot waterfowl, but the hunter must leave the boat before shooting.

* * *

.22 CALIBRE RIFLE FOR SMALL GAME HUNTING

Q. Is it legal to use a .22 calibre rifle for small game hunting? How many shells may I have in the magazine?

G.S.C.—DuBois, Pa.

A. You may use a .22 rifle for small game hunting in season if the rifle does not reload automatically. If it is a repeating gun, this rifle may be loaded to full capacity for such shooting, as the three-shell limit applies only to shotguns.

PUMP GUN WITH SHORT BARREL

Q. Is there any specified length to the barrel of a pump gun for hunting purposes? How short can it be? The gun I have reference to is a 20-gauge pump with a sawed-off barrel.

G.B.—Carbondale, Pa.

A. The Game Law places no restriction upon the length of barrel on shotguns for hunting purposes, but the Firearms Act of 1931 as amended requires any shotgun with a barrel less than twenty-four inches to be registered with the County Treasurer before it can be transported for hunting. If your 20-gauge gun has a barrel under twenty-four inches, you may use it for hunting purposes by registering it with your County Treasurer. The fee is fifteen cents when you show him a hunting license for the current year.

* * *

TEN-YEAR-OLD BOY HUNTING

Q. "Will you kindly advise me if I may hunt small game. I am ten years of age and am very sensible in handling a .410 gauge shotgun. I have the consent of my father to write you and will do all my hunting in his company. Also advise me if I will need a license."

H.B.—Etna, Pa.

A. Sorry, but a boy your age may not hunt small game in Pennsylvania except on his own home grounds or those adjoining. While we appreciate your desire to enjoy this sport, it will be necessary for you to wait until you are twelve years of age before it is possible for you to purchase a hunter's license, and you must have one to hunt.

A shotgun, even one as small as a .410 gauge, is a dangerous instrument in the hands of a young inexperienced boy, and if you will just be patient for a couple more years. I am sure you will at that time be better able to use the gun on small game.

* * *

BOY TRAPPING RACCOONS

Q. Does a boy fifteen years of age need a license to trap raccoons?

A. Yes. The free privilege extended to persons under eighteen years of age to trap applies only to the trapping of fur-bearing animals and predators. Raccoons are game animals.

* * *

CARRYING RIFLE FOR SUNDAY TRAPPING

Q. Is it O.K. to carry a .22 rifle when I look at my traps on Sunday?

J.Mc.D.—Shamokin, Pa.

A. Yes, so long as you do not shoot at any game birds or animals on Sunday.

THE 1939 GAME KILL

By NELSON E. SLAYBAUGH

SEVERAL months ago the Commission released preliminary figures on the 1939 game kill based on reports filed by eighty-nine and one-half percent (89½%) of the licensed hunters. As a result of the Commission's educational approach, as more fully explained later on in this article, the percentage of hunters filing their reports was boosted to ninety-eight and one-half perecent (98½%)—taking a lead of one-half percent over 1938. The table below shows the final official game kill for 1939, also the average recorded yearly kill during the past five years and twenty-five year period for comparison:

Species	1939 Game Kill: Tabulated Kill	1939 Game Kill: Preliminary Field Estimates	Average Annual Kill Last 5 Years	Average Annual Kill 25-Yr. Period
Elk	closed	closed	closed	4
Deer (Antlered Bucks)	49,106	26,978	26,067	13,212
Deer (Antlerless)	*14,581	7,167	46,582	13,464
Bears	535	585	442	452
Rabbits	3,804,701	2,493,270	2,890,735	2,952,981
Hares	closed	closed	2,640	(a) 12,107
Squirrels	945,471	660,931	935,286	764,867
Raccoons	38,452	40,646	34,531	37,377
Wild Turkeys	5,191	4,320	5,656	3,993
Ringneck Pheasants	471,539	386,380	381,847	164,348
Ruffed Grouse	237,245	106,659	185,454	228,639
Quail	111,674	37,712	117,340	116,458
Woodcock	40,816	31,471	42,091	
Wilson's Snipe, Gallinules and Rails	6,294	15,279	11,493	42,275
Wild Waterfowl	38,474	43,318	24,912	35,845
Grackles (Blackbirds)	47,449	40,877	69,754	(b) 106,083
Woodchucks	178,691	105,809	162,109	(c) 161,824
Total Pieces of Game	5,990,219		4,936,937	4,653,929
Total Weight in Tons (Hog Dressed)	8,897		7,512	5,308

*Antlerless deer season in all of Forest and Warren and parts of Jefferson and Potter Counties only; other counties closed.
(a) Average annual kill in total based on separate record for 10 years only.
(b) Average annual kill in total based on separate record for 11 years only.
(c) Average annual kill in total based on separate record for 2 years only.

Estimated Kill Conservative

The tabulation for 1939, as in 1937 and 1938, revealed the fact that our field officers' estimates on all species, with the exception of bears, raccoons, shore birds and wild waterfowl, were too conservative. Assuming that this would also apply to the years prior to 1937 when the kills were for the most part based on field estimates, then the published game-kill reports prior to 1937 in the main were very conservative—not too high as many believed.

Results Compared

The above table reveals some striking comparisons, especially the fact that the 1939 kill exceeds the average annual kill during the last twenty-five years by 1,336,290 pieces, and in weight by 3,591 tons. As will be observed, with the exception of quail and grackles (blackbirds), the 1939 kill for all species greatly exceeded the average annual kill during the last twenty-five years. In the case of the quail the severe winter of 1935-36 reduced these birds to such a low status that it may be several years before the crop will reach the normal kill prior to 1935.

The three tables herein published (the 1939 final game kill, the average annual kill during the past five years, and the average kill for the twenty-five year period) are given so the reader may see for himself how the total annual bag, as well as that of any given species, is holding up—or dropping off. In other words, this is one type of barometer by which we may judge whether the work of the Game Commission is geared to meet present day needs, that is, does the shootable supply of game reasonably satisfy the demands of an ever-increasing army of hunters, or is it falling short of that demand. A fair-minded analysis will convince anyone that the "balance sheet" on the whole looks very encouraging.

If the receipt and tabulation of the game-kill reports did no more than furnish authentic information on the annual game kill, the expense involved and the little effort on the part of the hunters would be more than justified. But much more is accomplished. The matter of cheating in obtaining licenses since 1937 has been reduced to a minimum. Furthermore, this check-up discourages non-residents from attempting to purchase resident hunter's licenses, with the result that it is now a rare thing to apprehend a non-resident for hunting on a resident hunter's license.

The average kill during the last twenty-five (25) years is taken from Executive Director Gordon's article, "An Analysis of Methods Used to Collect Game-Kill Statistics", published in the November issue of the Pennsylvania Game News. Sportsmen desiring a complete file on the game kill in Pennsylvania over a period of many years will do well to file for permanent use copies of the November and December issues of the Game News.

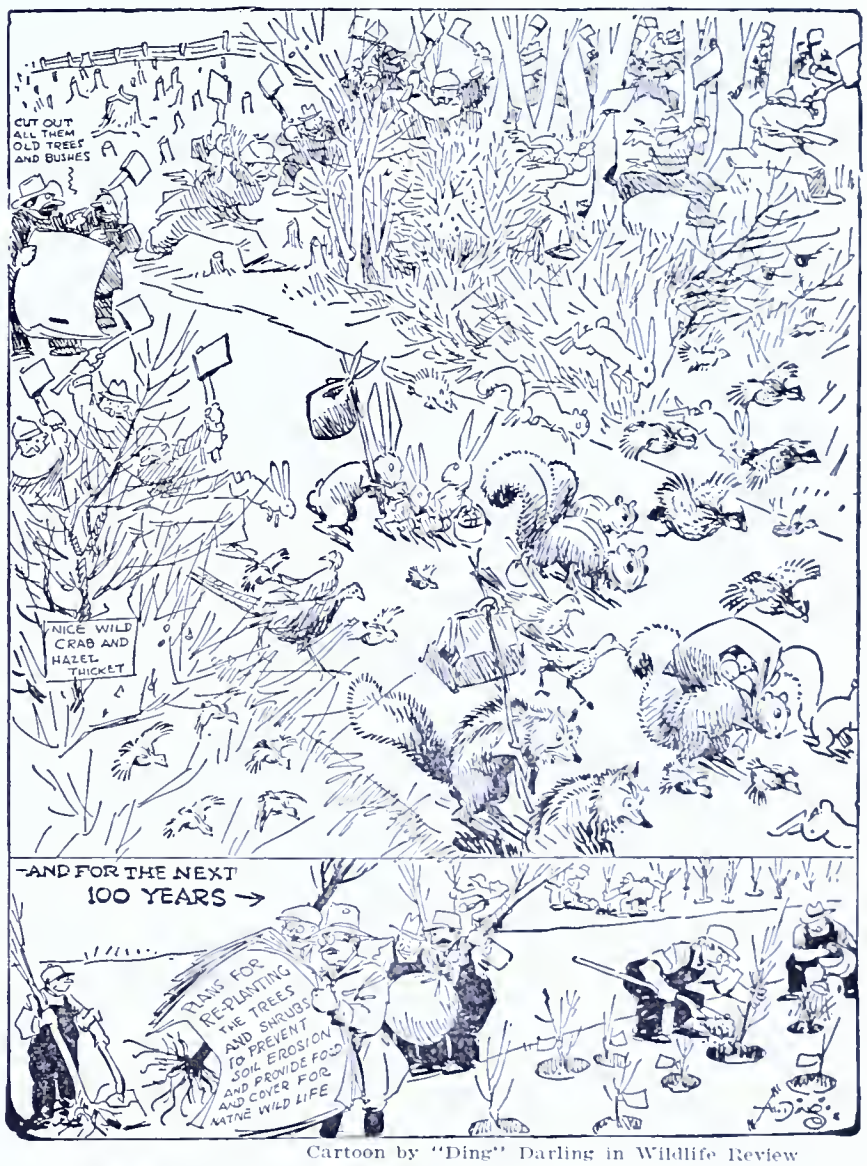
Number of Days Hunted

Up to this time no authentic information has been available concerning the average number of days hunted per man, or how he divided his time between small game and big game hunting.

In 1939 for the first time space was provided on the hunters' licenses to list the number of days hunted for small game and big game separately. This information was compiled at the same time the game kill was tabulated. Out of the 661,314 hunters who filed game-kill reports, there were 382,514 (58%) who supplied informa-

(Continued on page 32)

REFUGEES



Cartoon by "Ding" Darling in Wildlife Review

Ruthless destruction of our forests and our soil will decimate the supply of wildlife. If we want to send in good game reports in subsequent years we must protect these two great natural resources.

METHODS AND OPINIONS

They awake to see a magnificent, massive deer standing within close range.

IF you go hunting for deer you probably have your pet theories and favorite methods concerning deer hunting and the much discussed "Pennsylvania deer problem". Many solutions to solve this problem have been proposed. Many of them are a credit to the hearts of their sponsors, but not to their heads.

Roughly there are six distinct groups of hunters—the stalkers, the long-range hunters, the drivers, the pot hunters, the wanderers, and the road hunters. Unfortunately a surprisingly number of hunters are rather careless and inconsistent.

The stalkers represent one of the best and most conscientious groups of hunters. They depend upon their knowledge of woodcraft and know the habits of the game they are hunting. Stalkers do not need a heavy cartridge or one of high velocity and flat trajectory. They are in a position to place a bullet in a vital spot at close range. Most of them use a medium weight bullet with a fair amount of shocking power to prevent fatally wounded deer from escaping to die a lingering death later.

The experienced stalker using a relatively light rifle can successfully stalk and kill a deer with one shot. The same rifle in the hands of a novice would no doubt be ineffective and practically worthless. The caliber rifle you need depends upon your methods, the topography of your hunting ground, and always upon your shooting ability.

Stalkers prefer to hunt alone, away from the noisy drivers and the general uproar of amateur hunters. They realize the pressing need for an open doe season and know that the deer herd must be reduced if small game is to survive in the moutainous counties. They respect the interests of the small game hunters and very seldom do any of them propose burning the forests to insure a natural supply of food for deer or other wildlife.

The long range hunters represent a careful group as a whole. Their methods differ from those of the stalkers because they prefer to kill their deer at long range. They are aware of the habits and fancies of the deer, but they depend upon their efficient rifles and ballistic knowledge. They usually have good quality, modern equipment A high velocity cartridge with a flat trajectory and plenty of penetrating power meets the approval of this group. Inevitably a telescope sight and a pair of binoculars constitute part of their equipment. Hunters of this type often hunt in pairs always within binocular sight of each other. They converse in "sign" language. Anyone observing two long-range hunters communicating by this method believes he is watching two candidates for a mental institution.

This method of hunting is very effective and many deer are killed at long range, some few at five hundred yards or more. Binoculars and telescopes enable long-range hunters to discern objects that are invisible to the naked eye, consequently many legal deer are killed that appear to be illegal to the hunter not equipped with these magnifying instruments. It is an exception rather than the rule for a hunter of this type to be guilty of shooting at anything on suspicion.

With the exception of a discriminate few, the long-range hunters do not oppose an open doe season. Their knowledge of the habits and the habitat of deer combined with the fact that they hunt the same territory each year has proved to them that the amount of game that can be consistently propagated on any given area depends primarily upon the available food.

The pot hunters are a rather unique group. They have neither time nor ambition to waste precious minutes walking after deer. It is the goal of every pot hunter to find a luxurious spot in the mountains as close to the road as possible. Their rifles, of no particular caliber or shooting qualities, are placed against a convenient tree. They find a thick spongy bed of moss and relax. Eventually they lazily drift into blissful sleep. To complete a perfect day they awake to see a magnificent, massive deer standing within close range. One shot and the deer drops! Alas, it was only a dream.

This group usually condemns an open doe season. Their success depends upon a large deer herd, especially young deer that are not "gun shy" or wary. They fail to see the danger of in-breeding and low vitality which tends to promote disease. Fawns are poorly developed and many deer have been killed that were thought to be healthy, well developed fawns and yearlings; yet in reality they were old deer lacking the necessary food to develop them into normal, mature animals. Food problems, winter range, or the future welfare of the herd are not considered by them in their analysis of the "deer problem".

The pot hunters claim to have the inside dope. That inside dope probably accounts for their lack of energy. However, win, lose or draw, they are not a serious menace in the woods. Their lack of ambition prevents them from causing serious harm, although at times they are accused of shoot-

By ROBERT H. MUMMA

★

ing deer in drives, which often starts an argument. Ultimately the pot hunter will take the deer and the drivers will insist there should be a law against it.

The wandering group of hunters are a difficult group to classify. They do not have a specific code of rules or regulations. They merely wander in search of game. They are rather optimistic and depend upon fate to see them through. They operate by instinct and their chief characteristic is to become lost. Their sense of direction is practically zero.

Their guns consist of every caliber known and in some instances calibers that are unknown. Among a group of wanderers you will find a well mixed assortment of guns from muzzle loaders to anti-air-craft artillery. They are a dangerous group! Many of them are armed with **borrowed** guns. It is not uncommon for a hunter of this type to be incapable of loading his gun. They are completely ignorant of its shooting qualities. They know that it will shoot, but they don't know where. Maybe it is sighted in for one hundred yards, possibly two hundred yards, but probably not at all.

This is one group largely responsible for the mounting toll of hunting accidents. They have nervous "trigger fingers". Anything brown might be a deer, but it could be a man. They lack the necessary skill to get within their limited shooting range of a deer, consequently they are inclined to cross their fingers and chance a shot. This group advocates deer unlimited. Their theory is based on the odds of one in a million and their chances of shooting a deer are even less, under normal conditions.

They are interested in the sportsmen's problems only one day a year, the day they hunt. In that single day they have become more familiar with the deer problem than have those who have devoted years to scientific research and an intensive study of it. After their one day of hunting the energetic few return the borrowed guns and many forget even that.

Within this group there is a vast reserve of potential sportsmen. It is merely a matter of education and in the course of a few years it will produce many excellent hunters.

The road hunters are the parasites of the deer hunting fraternity. They are without doubt the most dangerous, inconsistent, unruly group of hunters known. They depend upon the efforts and hard work of the drivers, stalkers, and long-range hunters to chase a deer within shooting range of the road. They patrol the roads in their cars until they hear a drive. Then they stop and erect their spotting 'scopes, remove the **loaded rifles** from their car and immediately subject the first deer they see to a barrage that would do just credit to any army artillery. Woe to the unfortunate deer that moves; it will be perforated instantly! Their philosophy is to shoot and determine the sex of the deer after it is dead. In many instances the carcass is drawn and quartered by the terrific bombardment of an organized carload of road hunters.

They are the fellows that spin hair raising yarns about their thrilling hunting trips. The execution of a split-second shot that required perfect timing while the deer was high-tailing it as only deer can; the gruesome task of climbing the steep, rocky ridges and carrying the trophy down those rugged ridges. The ever present audience of innocent bystanders always agrees that these fellows must be good hunters. They must be; they shoot deer most every year. Frankly, they are a menace to every veteran hunter. Not only do they endanger human lives; they continually violate the game laws and refuse to respect the rights of others.

Woe to any solitary hunter who happens to be within shooting range of a group of road hunters when they kill an illegal deer and are in urgent need of an alibi. Their method of escaping the punishment they deserve is very simple. They claim that the solitary hunter killed the illegal deer and what can one hunter prove when ten or more fellows contradict him. More than one solitary hunter may have been the victim of circumstantial evidence, concocted by unscrupulous road hunters.

This group demands in no uncertain terms that there must be more deer. They buy their hunting licenses and proceed to act as though they had a monopoly on all the game in the Commonwealth. Deer damage to them is an unwarranted complaint filed by a grouchy farmer who is trying to gouge a few easy dollars out of the sportsmen's fund. They refuse to learn the true meaning of conservation and are only interested in their personal success.

It is not a disgrace to be a "pot hunter" on your initial hunt. However, your methods and knowledge should improve with a few years experience. It is not justifiable to be a road hunter, especially after you have passed through the complete hunting metamorphosis.

The drivers are the most ambitious and constitute the majority of the deer hunters. In this group you will find a cross section of the combined groups. As a whole they are a jolly, hard-working, constructive set of appreciative hunters.

To drive deer requires and develops good lungs and legs. It is not a lazy man's game. Every hunter is familiar with the calls and hoots of the drivers. They depend upon their noise and general excitement to frighten and excite the deer into a nervous state. Many deer become absolutely "bushed" or momentarily unconscious of their actions when they hear the fear-inspiring noise of the drivers.

(Continued on page 31)

Photo courtesy Philadelphia Inquirer.
Stalkers represent one of the best and most conscientious groups of hunters.

I WAS AFRAID I WASN'T GONNA MAKE IT! MY ALARM DIDN'T GO OFF!
DO YOU ALWAYS SLEEP WITH YOUR BOOTS ON?
THIS TRIGGER'S STUCK - LOOK IN AND SEE IF IT'S LOADED!
HEY, CUT IT OUT - I DON'T WANNA LEARN TO PLAY NO HARP!
IT'S MY WIFE'S IDEA - SHE'S AFRAID I'LL GET LOST!
SHE SORTA HAS YOU COWED, DON'T SHE?
I SNITCHED IT OUT OF THE HALLWAY - I'M GONNA USE IT FOR A DECOY!
HUH?
LOOK AT THE BUGGY WHIP I GOT TO USE IN THE BIG DRIVE!
TING A LING
I GOT A COMPLETE NEW ENSEMBLE FOR THIS TRIP... THERE'S ONLY ONE THING I FORGOT!
YES, I KNOW, I FORGOT ONE TOO..... A GUN!
HE SAYS HE'S NOT TAKING ANY CHANCES ON GETTING SHOT!
CARROLL

ARE YOU SURE IT'S A DEER WE TRACKED HERE ELMER?
MY WIFE SAYS I SHOULD SHOOT A NICE YOUNG TENDER ONE ABOUT THREE YEARS OLD
WHAT'S SHE EXPECT YOU TO DO - GO UP AND COUNT ITS TEETH BEFORE YOU SHOOT?
I SHOULD'A KNOWN BETTER THAN BRING SUCH A DUMB CLUCK! DON'T YOU KNOW THE DIFFERENCE BETWEEN A DEER AND A HORSE?
DOGGONE THOSE KIDS!
POP
HE BROUGHT HIS KID'S POPGUN BY MISTAKE!
LOOK WHAT YOU'VE DONE! TAKE IT RIGHT BACK AND EXCHANGE IT FOR A RABBIT!
BOO HOO, POP SHOT SANTA'S REINDEER! NOW HE CAN'T COME TO SEE ME!
I'LL TAKE A LEG!
A LEG? WHAT DO YOU THINK THIS DEER IS, A CHICKEN?
MERRY XMAS, EVERYBODY!
CARROLL

CURRENT TOPICS

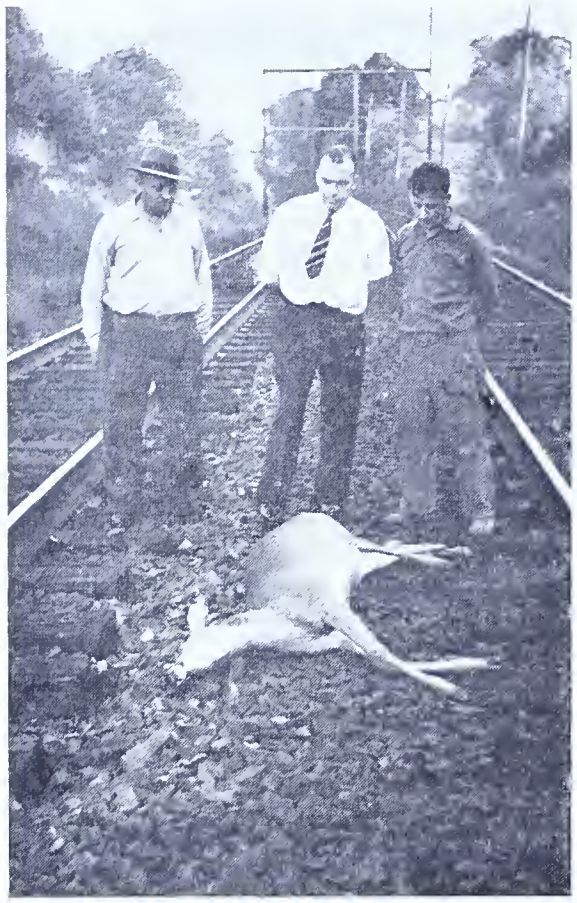


Photo by George Burger

Deer hit by train about 50 yards from Fort Washington station, Montgomery County. Left to right: Game Protectors Ambrose Gerhart and Earl Carpenter and a Deputy.

NATURE'S GREATEST FOE

A verdant forest of pine and oak,
Which abounded in song birds and animal folk,
With wooded hills both high and low,
Flourished in splendor many years ago.
Through its tranquil depths a river wound,
In which countless fish did abound.
Gay wild flowers sprung from its earth,
While hordes of insects hummed with mirth.
Grandeur supreme reigned over this land,
Until a demon with a fiery hand,
Left desolation in its horrid wake,
Destroying all beauty that God did make.
Blackened trunks their ugly heads rear,
The song of the bird you'll never-more hear,
The river is gone and will flow no more,
The gay flowers vanished from the forest floor.
Charred hills now show barren their crest,
Wild game and fish have fled with the rest,
All nature is dead and lies on her pyre,
With no one to blame but this demon called FIRE.

—Thaddeus L. Jascavage.

Those interested in birdlife, particularly the species which were killed indiscriminately for so many years to supply feathers for Milady's hat, will enjoy reading a little pamphlet recently published by the National Audubon Society. Its title is "Massacred For Millinery" and its author, Richard H. Pough, of the Audubon staff, presents some very enlightening information on the subject in a very interesting way.

Seth Gordon, Jr., well known to many of the field and office employees of the Commission, and to many sportsmen throughout the Commonwealth, has chosen to follow his father's footsteps, according to an announcement made recently by the Conservation Department of North Carolina. Seth Jr., who secured his Bachelor of Arts Degree at the American University, Washington, D. C., and his Master of Science Degree at the University of Michigan, has specialized in wildlife management and has had much specific training in the field of forestry. With his excellent background together with his experience and initiative, he will no doubt go far in his chosen profession. His first assignment will be that of making a thorough study of the white-tailed deer in North Carolina. Back of this study is the desire on the part of the North Carolina Conservation Department to develop and redistribute deer on suitable areas within the State.

STOLEN

"A Model 12, Winchester .12 Gauge Pump Gun, with raised ventilated rib; straight grip; butts compensator attached to barrel; butt plate—black smooth bakelite approximately ¾" in thickness. Bottom of barrel states "Standard Trap" but the length of the barrel of this firearm was 26 inches. Serial No. 808886."

This firearm was stolen from H. F. Sterling at the Crawford County Sportsmen's Council Skeet Field on Sunday, October 6, 1940.

Any person having information relative to this gun should communicate with this office, or Game Protector Donald E. Miller, Box 521, Hydetown, Pennsylvania, (Telephone—Titusville 443) who will be glad to contact Mr Sterling.

SUMMARY OF FUR-BEARING ANIMALS AND PREDATORS TAKEN DURING THE 1939-1940 SEASON

Species	No. Sold	Average Price	Total Amount
Muskrats	407,767	1.04	$426,395.55
Skunks	321,893	.63	204,970.50
Minks	9,034	5.32	48,099.18
Opossums	110,479	.20	22,198.13
Beavers	702	13.54	9,512.14
Otters	18	9.66	174.00
Raccoons	33,095	1.88	62,229.45
Weasels	36,581	.24	8,886.26
Red Foxes	6,955	2.23	15,435.53
Gray Foxes	10,519	1.55	16,385.81
Wildcats	12	1.22	14.65
Totals	937,055		$814,301.20

Practices designed to encourage wildlife production invariably conserve soil and water resources and build back some of the fertility wasted through unwise agricultural practices, according to Biological Survey officials. For instance, nut-bearing trees, berry-producing shrubs, and legumes such as sweet clover and lespedeza can be planted in gullies and on thin, worn-out lands to prevent further erosion, yet furnish nesting cover and winter food for pheasants, quail, rabbits, and other wild animals and birds.

The subject of how deep ducks dive for food was tested recently by Dr. Harry Leon Kutz, Cornell University zoologist. Dr. Kutz experimented with Mallard and Black ducks by dropping corn into varying depths of water. At five and seven foot depths both Mallards and Blacks competed successfully for the corn. But at a ten-foot level, the Blacks monopolized the grain, the Mallards being unable to reach it.

How not to hunt Bears.—Baron Munchausen.
"And snuck up behind him and socked him over the head with a club. I didn't? No? Was you dere Charlie?" — Yes folks, it's a stuffed bear.

CURRENT TOPICS

ANNUAL TRAP CONTEST

The American Humane Association announces the opening of its fourteenth annual humane trap contest for 1941. National prizes totalling $550.00, and a number of special State Prizes are offered for the following three groups:

Traps for taking animals alive and unhurt—First Prize $150.00, Second Prize $75.00. Leghold Type (Traps that hold without injury)—First Prize $100.00, Second Prize $50.00. Traps that kill humanely—First Prize $85.00, Second Prize $40.00.

A special prize of $50.00 donated by General Charles McC. Reeve will be awarded at the discretion of the judges.

The contests are conducted for the purpose of stimulating an interest in the invention, development, production and use of humane devices and methods for taking animals when it becomes necessary to do so. The contest closes April 30, 1941.

For entry forms or further information, write the Wildlife Department of The American Humane Association, 135 Washington Ave., Albany, N. Y.

"While patrolling in Wharton Run recently I saw a big doe with a nice rack of horns and two very nice fawns. I think this is quite out of the ordinary."—Game Protector Ernest E. Hunsinger, Potter County.

"A dairyman sent word that he wanted to see me. Upon calling on him I found that he was having trouble with a deer sucking the milk from one of his cows. This had been going on for some time and he said he first noticed something was wrong when the cow's milk supply decreased and that the cow became nervous when he milked her. A neighbor told him he saw a calf sucking the cow, but the farmer didn't have any calves in that pasture. He started doing a little investigating and discovered the deer with the cow. The deer got so bold or tame toward the last that it would come clear up to the barn with the cows at night. I had him tie a large cow bell on the cow to keep the deer away. I haven't been back to observe the results."—Game Protector Fuller H. Coffin, Erie and Crawford Counties.

"On September 16 a Bald Eagle landed on a farm near Freysville between the house and barn. The farmer, afraid of losing some chickens, attempted to chase it away, but the bird seemed unable to take off. The farmer caught it and placed it in an empty chicken house. He noticed it was terribly thin, almost starved in fact, so he went to a pen where he had chickens, looked them over, caught one that didn't look so good and threw it to the eagle. The eagle grabbed the chicken with its bill, nipped off and swallowed the head in one gulp. The chicken lasted only a few minutes. After that the farmer threw a chicken or two to the eagle each day and in a week the bird was in good shape. I sent it to the Harrisburg Zoo where it is now on display."—Game Protector Clinton Ganster, York County.

Photo by W. F. Mason

Two acre food plot of Pa. game plot mixture and buckwheat on State Game Lands No. 89.

"While looking out the upstairs window (September 26) I saw a grouse smash a 10x12 window light out of an old garage and come flying out and away to the woods. Upon investigating I found there was a grapevine up against the old garage, and as there was no door on it, and weeds growing up and into the building, no doubt the grouse worked its way inside and when ready to leave saw the light from the window and flew into and through the window. It sure made the glass fly but the bird seemed none the worse for the experience."—Game Protector W. B. McClarin, Cambria County.

"I find that the deer are taking advantage of the beavers in order to obtain their food. After the beavers cut down an aspen tree, the deer eat the leaves and twigs."—Game Protector George Sprankle, Cameron County.

"One of the W. P. A. men saw 7 bears the other day, including an old bear and three cubs. The grouse this year are not showing up very good."—Game Protector Chester S. Siegel, Lycoming County.

Photo by Frank R. DeHaas

Young Turkey Buzzard captured on Bar Bottom across Loyalsock Creek from Game Refuge No. 7, Lycoming County. The nest was on a high, bleak, stony point.

"Had an interesting time watching a small turkey poult (not over ten days old) feeding. I first saw the poult chasing after a locust and catching it. Supposing that the bird would pick the locust to pieces and then swallow the pieces, I was amazed to see it immediately swallow the insect whole. The bird's actions in swallowing the locust were very similar to a snake swallowing a large object. The locust seemed to be almost as large as the turkey's head."—Game Protector Ross L. Metz, Huntingdon County.

"While I was observing a hen grouse and her brood of 9 young in West Cowley Run, a sharp-shinned hawk swooped down and picked up one of the young grouse. I was able to get my shotgun from the car and kill the hawk, as it seemed to be having trouble getting away from the ground. The grouse were about half grown."—Game Protector Paul S. Narby, Cameron County.

"110 clump plantings of conifers, of 100 seedlings per clump were made on Game Lands by W. P. A. labor and barricaded to prevent deer damage. The work consisted of cutting and piling a sufficient number of saplings, Gray birch where possible, to form a brush fence from 6 to 7 feet high, enclosed an area 60x80 ft. for each planting. A total of 8500 Norway Spruce and 2500 Banks Pine were barricaded."—Game Protector Gilbert Bowman, Lackawanna County.

Since the revocation of hunters' licenses were first authorized by the Act of April 21, 1921 to date 3,917 persons were denied the right to hunt for a period of one to ten years. Most revocations included one and two year periods. Inasmuch as 54,285 persons were prosecuted for violations of the Game Laws since the passage of the Revocation Act of 1921, the precentage of persons who lost their licenses for various periods during that time were relatively small—in fact they represent only 7.2% or one out of every 14. The average revocation period arrived at under this general summation is estimated to be 1½ years.

CURRENT TOPICS

Hundreds of people viewed the unusual sight.

A BEAR STORY

It was 3 o'clock Sunday morning, September 22, and "Lucky" was barking as fiercely as a Pomeranian can bark. He would have awakened the neighbors, but Mr. and Mrs. Henry C. Sipple have no nearby neighbors for they live about a mile up the Conewango Creek above Russell. That's in Pine Grove Township, Warren County.

Anyway "Lucky" woke up Mrs. Sipple who proceeded to investigate the cause of the little dog's excitement. "Lucky" was interested in something outside the kitchen door and taking a flashlight Mrs. Sipple stepped out the door for a look around. An instant later she found herself face to face with an old she-bear who was on her way up the big maple tree that grew just outside said kitchen door. Furthermore, the she-bear was the fourth bear on the way up that tree. She had been preceded by her three cubs.

The lady of the house exerted no uncanny presence of mind in beating a rapid retreat to the kitchen.

How much sleeping was experienced by the Sipples between 3:00 A. M. and 5:00 A. M.

Game Transfer

The time is at hand when another extensive program of wild game transfer will be entered into by the Game Commission and cooperating sportsmen's organizations. This program, which has been operative during the past few years, has been highly successful, and has assured a continuous supply of native trapped game in the various counties of the State, in some cases in large numbers, in others in limited numbers, depending upon existing activities.

Game thus trapped, particularly rabbits, has proved much more satisfactory because of its nativity than those animals which have been purchased for many years from midwestern states. Furthermore, native rabbits can be trapped from restricted areas and released on public hunting grounds much more cheaply than they can be purchased. The Commission urges every organization in the State to take part in this worthy program.

Mamma bear, the odds against her, decided that discretion was the better part of valor.

CURRENT TOPICS

IN PICTURES

is not known, but at 5:00 A. M. John Hopkins, local Game Refuge Keeper, received a telephone S.O.S. and accompanied by George Norris, Warren County Game Protector, proceeded to resume a weary vigil.

Resume is the word, because the morning before the same bear family had been treed by some dogs about a half mile further up the creek and Protectors Norris and Hopkins were called to the scene when scores of people gathered around the tree which was not far from the highway.

Throughout Saturday and until after midnight hundreds of people seeking a good look at a bear or rather four bears, visited the spot. The creatures left the tree shortly after midnight and travelled across the Conewango and down to the Sipple home where they remained treed until sometime after midnight.

Hopkins, Norris and the Sipples hope the old bear and her youngsters have satisfied their curiosity of how the other half of the world lives and have returned to the mountains.

The animals destroyed many apple trees by breaking off the limbs for their fruit.

The cubs didn't know what it was all about, but they did know enough to depend on the sagacity of their mother for protection.

Distribute Apple Pomice

Sportsmen's organizations are urged to contact local cider mills and arrange wherever possible to haul apple pomace from those mills into the woods to be used as game food. Last year field employees of the Game Commission distributed more than 300 tons and observations showed that it was eaten extensively by deer, rabbits, grouse, wild turkeys, squirrels and even bears. Sportsmen's organizations also distributed quite a bit of this potential game food last year, but the Commission believes that this program should be carried on more extensively and encourages more clubs to get behind it this year.

The material should be transported before the roads become bad in order to distribute it more widely and to get it farther into the forests. When it is placed too near main travelled roads it attracts wildlife which subsequently, as it often turns out, is killed by automobiles.

WITH THE CLUBS

Some of the Gallery at the Wayne County Field Trials.

WAYNE COUNTY TRIALS

Wayne County sportsmen held a splendid Field Trial which was run on the grounds of the Wayne County Poor Farm, Sunday, September 15, beginning at 7:30 A. M.

The first stake, the Membership Stake, was for members of the Wayne County Sportsmen's Association only.

First brace—Cunningham's Mike, Irish Setter, owner and handler, W. G. Cunningham. Brace mate Lovely Red, Irish Setter, owner and handler. Lyndon Schweighofer.

Second brace—Red, Irish Setter, owner and handler, Frank Westgate. Brace mate, Mancha King, English Setter, owner and handler, W. C. Steelman.

Third brace—Blackburn, English Setter, owner and handler, Francis Gill. Brace mate, Lady K, pointer, owner and handler, Major C. J. Kelly

Fourth brace—Mona Queen, Irish Setter, owner and handler, Homer Smith. Brace mate, Farnham's Jerry, Irish Setter, owner and handler, Norman Farnham.

Fifth brace—By dog Sandy, English Setter, owner and handler, Dr. Lord.

First place went to Sandy; second, Lady K; third, Mancha King; fourth, Blackburn.

All Age Stake

First brace—Dock, English Setter, owner and handler, Harold Stewart. Brace mate, Marvel Mike, English Setter, handler, Dick Hall; owner William V. Murphy.

Second brace—Sussex Hills Jake, pointer, owner and handler, Dr. Raymond S. Huff. Brace mate, Mona Queen, Irish Setter, owner and handler, Homer Smith.

Third brace—Sally, pointer, owner and handler, Harold Stewart. Brace mate, Mr. Eugene's Miss, English Setter, owner and handler, Benet Gano.

Fourth brace—Merry Mary, English Setter, handler, J. R. Shaffer; owner, Sherman Ames. Brace mate, Middleburg Dan, pointer, owner and handler, R. S. Miers.

Fifth brace—Lexington Steve, English Setter, owner and handler, William A. Boettger. Brace mate, Knochavoc Joffre Lue, Irish Setter, owner and handler, Carl E. Ollendike.

Sixth brace—Hew's P. H., pointer, handler, Doc Mazzau; owner, William V. Murphy. Brace mate, Lady, English Setter, owner and handler, Joseph Latouri.

Seventh brace—Mauva Dell, pointer, owner and handler, James Youtz. Brace mate, Virginia R Boy, pointer, owner and handler, Dr. B. F. Driggers.

Eighth brace—Lynoak Alex Kagan, pointer, owner and handler, W. J. Zimmerman. Brace mate, Sandy, English Setter, owner and handler, Dr. Lord.

Ninth brace—Pete, pointer, owner and handler, Harry Nicholson. Brace mate, Punch, pointer,

The first place went to Lynoak Alex Kagan; second, Sussex Hills Jake; third, Mauva Dell; fourth, Middleburg Dan.

Merry Mary and Middleburg Dan were called back for a second series. Apparently the judges wanted to see a little more of this brace of dogs in the bird field. Certainly, no one could criticize their ground work in the initial heat.

Lynoak Alex Kagan, winner of the first place, put on one of the finest exhibitions that one could expect to find in the highest class field trial. He turned in an exceptionally good ground heat, cutting the ground very well and hunting the birdie spots. In the bird field he came up with five beautiful finds and handled all of them well. Jay C. Gilford, Field Division Supervisor who acted as one of the judges along with Mr. Armstrong, said, "I cannot pass without making mention, also, of the fact that Lynoak's handler, in my opinion, exhibited the best piece of handling that I have been privileged to witness for a long time."

The second place winner, Sussex Hills Jake, a beautiful pointer dog, turned in excellent work under some very difficult conditions.

The third place winner, Mauva Dell, a pointer bitch, had a lot of class and in the bird field she came up with two beautiful finds. Her manner and style were a credit to any owner and handler.

The fourth place winner, Middleburg Dan, a pointer, cut his field very well and not to be outdone by the winners of the other braces, he, too, gave a good account of himself in the bird field.

There were a lot of other very good dogs in this trial. Even though they did not, in the judges' opinion, warrant any of the winners' places in the trial, we are rather confident that in another trial with the breaks of the game, some of the dogs that were not placed may change places with winners in future trials.

We cannot help but comment upon the success of the efforts of the Wayne County Sportsmen, for only last year they put on their first bird dog field trial, which possibly we should not say too much about, other than it was their first attempt. Nevertheless, one year later they have shown that their efforts and determination have not failed, and the

PRAYER FOR MERCY

Soon the woodlands will echo to the rifle's loud report
For soon an army of hunters will be afield in the name of sport;
But need the close of some near-future day
This shameful condition mark;
Need some lesser creature lie
Dying alone in the dark,
Suffering and bleeding in silence because someone lacked the will
To complete a sportsman's duty—the mercy of a kill?

O Red-Gods-of-the-Forests! grant hunters every one
A measure of completeness to shoulder with his gun;
Let every hit be hard and sure.
Let every miss be wide,
Grant skill-in-aim it's just reward
And wariness it's pride,
But frown upon those heartless ones that would a sportsman's measure fill
And yet withhold when needed the mercy of a kill.

Robert F. Keagle.

WITH THE CLUBS

reward is most gratifying and will long be remembered by the large gallery who attended this trial.

The organization found a splendid course on which to hold its trial. They had plenty of birds for liberation, giving all dogs, as near as possible, an equal chance on game.

We will not hesitate in the least to venture the guess, even though this trial is a real credit to any organization, that next year's will be much better, judging from the type of dogs and handlers that attended it this year and the cordial reception afforded the guests by the members of the association.

The judging of these two stakes were in the hands of Mr. Armstrong and Mr. Jay C. Gilford, Field Division Supervisor of the Game Commission.

KEYSTONE TRIALS

The Keystone Setter and Pointer Club of Reading completed the most successful field trials of its career on September 21 and 22. Several thousand people witnessed the performance of ninety-two good pointing dogs during two days of exceptionally hot weather. Bird finding conditions were poor during the running of the Derby stakes, but right after the start of the Shooting Dog event a sudden heavy shower softened the weeds and the pheasants stayed where released. This pleasing condition also continued on the second day, and the large crowd of sportsmen and sportswomen attending were treated to many spectacular points at close range. Eighty-eight full grown pheasants were released during the trials. A summary of the Trials follows:

Sam's Maryland Jake, large, strong, and promising liver and white pointer dog owned by L. R. Brill, Hagerstown, Md., and piloted by Bob Bell, Gettysburg, negotiated the difficult (Sports Acres) course with plenty to spare and won the nod of the judges for first place in the first event, the Open Derby.

Close on his heels with another brilliant race, but finishing a little less strongly, was another liver and white pointer dog, Boy's Dee, owned and handled by our own secretary, J. Elwood Hollenbach, Wyomissing.

In third place was Frank Pancheri's promising little female setter, Tomahawk Sue.

Winners of the Open Derby 7th Annual Fall Trials of the Keystone Setter and Pointer Club, Reading. Left to right: "Sam's Maryland Jake", first place; "Boy's Dee", second place, and "Tomahawk Sue", third place.

This little black and white marked setter, kennelled at Tamaqua, goes out and keeps going in a very merry way. Sue was ably handled by E. G. King, Annville.

The judges, Charles Elder, Jersey Shore, and Bud Schaeffer, Upper Black Eddy, were hard pressed to name winners from this classy field of twenty-four derby dogs, but their decision was well received. Many of these young hopefuls turned in brilliant performances, but the excessive heat took a lot out of them, and they were not quite good enough to win.

The Open Shooting Dog stake, staged Saturday afternoon, the twenty-first, found twenty-seven dogs facing the same hard working judges, Messrs. Elder and Schaeffer. The last brace just finished as darkness enveloped the large gathering of dog lovers still on hand. The awards had to be made with the aid of the automobile headlights. Winning the large silver trophy and blue ribbon was Brighty Blue, black and white female pointer, owned by G. Dawson Coleman, Rosemont, and handled by Tom Carmody, Lambertsville, New Jersey. Blue, a good steady going dog but yet plenty wide, had two well handled finds, one of them on the course, and after proving steady to shot and wings, finished his heat still merry and strong.

Second place went to W. J. Zimmerman's Lynoak Alex Kagen, a liver and white pointer dog. Alex, who abides in Lynoak, a suburb of Reading, has proved our best local representative at field trials during the last several years. In the last eleven times he has competed in shooting dog stakes he has won six, and placed second or third in the others. Alex had one well handled find in the bird field and also a beautiful back to help his cause along.

The third trophy and ribbon went to Hiker Briar Thorn, another consistent winner at eastern trials. Thorn, beautiful orange and white setter, handled by his owner, Dr. Carl Williams, Germantown, ran his usual even race, and after handling kindly his single spectacular find, nosed out several other good dogs, whose also pleasing work had them up there for final analysis.

Other good dogs finishing well up in the standing were: Ivor Knoll Spotty, and Ivor Knoll Ginger by W. Lippincott Colkett, Bryn Mawr; Frank of Sunny Lawn and Jenny of Sunny Lawn, Charles Forrer, Camp Hill; Frank Hawks Lady, E. G. King, Annville; Middleburg Dan 2nd, R. L. Miers, Phillipsburg, New Jersey; Raphs Lady Ginger, Oliver Raph, Allentown; Eudan's Nap B'O, L. J. Borzo, Willow Grove; Tunlaw Judy, J. Paul Brown, Swarthmore; Peerless Prides Beausport, Oscar Cupp, Lewistown; and G's Rhett Butler, Bob Gable, Baumstown.

Sunday, September twenty-second, featured the Open All Age Stake, with Charles Elder, Jersey Shore and Dr. Sherman Ames, Easton, in the saddle. After a hard fought battle between forty-two dogs featuring several second series, the orange and white ticked setter dog Hiker Dan captured the laurels. Dan, five year old, brilliant, from the Pet Mill Kennels, Lambertsville, New Jersey, was

Winners of "Open All Age" at Central Pennsylvania Field Trials. Right to left: "Gee-Whizz", first place; "Seven Mt. Bess", second place, and "Peerless Pride's Beausport", third place.

WITH THE CLUBS

Forestry Booth of the Huntingdon County Game, Fish and Forestry Protective Association, at the Club's annual field day.

piloted by Tom Carmody. Dan again repeated, as he has done so often during his five year campaign, in leading field trials. Dan, again left nothing to be desired, his range and pace being very pleasing, and his work on birds flawless.

The Pet Mill Kennels also captured second with Homewood Gallant Knight, liver and white pointer dog, performing exceptionally well and presided over by Carmody.

Carmody also featured in a divided third, rounding the female setter Hiker's June, owned by W. L. Colkett in a third place tie with Ginger-Bread Fashion, another female setter, owned by Kasco Mills, and handled by Ed. Knapp, Waverly, New York. Knapp won the toss up and received the ribbon. Both dogs turned in pleasing performances, afield and on birds.

Other dogs well up in the standing were: Bills Fred, Dr. J. T. Dougherty, Girardville; Tarengo Peerless Briar, Jules Frank, Philadelphia; Gentleman Jim Day, I. W. Day, Wyomissing, Lycoming Seaview Don, C. M. Balliet, Williamsport; Boy's Rex, M. B. Euston, Philadelphia; Brevities Mary and Burbon Bon, J. A. Williams, Philadelphia; Mike Proctor Ferris, Harry Edris, Lebanon; Ginger's Duchess and Gentleman Ginger's Bob, Frank Pancheri, Tamaqua; Sylvan Joe, Mark Spacht, Wiconisco; Tommy Boy, Thos. Rosakis, Bristol: Carolina Royal Duke, H. Werner, Wyomissing: Miss Mote Baird, Charles Forrer, Camp Hill; Kasco Little Shot, Gingerbread Fashion, Stoneway's Grand Slam by Kasco Food Co.; Frank of Woodridge, Frank Vermillion, Washington, D. C.; Son of Jack, W. L. Colkett, Bryn Mawr; Delaware Frank H, Dr. C. I. Hoch, Wilmington, Delaware; Garwood and G-Whizz, Dr. H. E. Longsdorf, Mt. Holly, New Jersey; Long Island Boy, Harold Watson, Cornwall Heights; Virginia R. Boy, Dr. C. F. Driggers, New Brunswick; Smithsonian, R. A. Robb, Washington, D. C.; Whitestones Florendales Beau, L. J. Bordo, Willow Grove; Beau Essig Broker, C. E. Dugan, Harrisburg; Little Nancy, G. Dawson Coleman, Rosemont; and Hazel Hedge Peerless, M. B. Euton, Philadelphia.

Many thanks are due the judges for their long hours in the saddle and the members and their friends, who worked so hard to make this the biggest Field Trial in eastern Pennsylvania. Also we want to thank our many patrons for their participation and hope to see them all next March at our Spring Trials, and may the best dogs win again.—R. Clyde Buck.

ST. CLAIR BEAGLE TRIALS

The Steig's Hollow Beagle Club, St. Clair, held its eighth annual sanctioned Field Trial September 1 and 2. There were 38 starters in the 13 inch class and 24 in the 15 inch class. Winners in the 13 inch class included:

First—Freelyn Vin Bet Dix, Dr. J. M. DellaCroce, owner and handler, Freeland, Pa. Second—Blue Cap's Echo, Edward Costello, owner and handler, Vaux Hall, N. J. Third—Spunky L, Frank Lamm, owner and handler, Reading, Pa. Fourth—Ameri Solitary Shiek, John Telesky, owner and handler, Berwick, Pa. Reserve—Blucapatch Dolly 2nd., Charles Snyder, owner and handler, Valley View, Pa.

Winners in the 15 inch class included: First—Blue Echo Belle, Edward Costello, Voux Hill, N, J., owner and handler. Second—Yellow Creek Sallie 2nd, Dr. R. H. Weisel, Bowmanstown, Pa., Carbon County, owner and handler. Third—Blucapatch Pal, Charles Snyder, Valley View, Pa., owner and handler. Fourth—Eden's Ripper, F. S. Lander, Wilmington, Del., owner and handler. Reserve—Conrad's Pal, Walter Conrad, Valley View, Pa., owner and handler.

The trials were held on the Club's Game Refuge at Lower Mill Creek, two miles east of Pottsville. The judges were George K. Brands of Stroudsburg and Gene Stebintsky of Sandy Run. John Spencer, Schuylkill County Game Protector, and Peter J. Filkosky, Traveling Game Protector, were among the large gallery to witness the event.

NORTHEASTERN DIVISION ELECTS

The Northeast Division of the Federation of Sportsmen's Clubs reelected John L. Neiger, of West Scranton, President for 1941. Mr. Neiger is also President of the Lackawanna Federation of Sportsmen's Clubs. Benjamin Kane, of Susquehanna, was elected vice chairman, defeating Willard Quick, of Stroudsburg, by a very close vote. Robert Steventon, of Nesquehoning, was reelected secretary of the division for the fifth term, and Henry W. Strohl, of Noxen, was elected treasurer to succeed Dr. F. S. Birchard, of Montrose, who expressed a desire to retire from office.

Photo by Frank L. Coen.

Ten out of fourteen red foxes killed in North Beaver and Little Beaver Townships, Lawrence County, during a three-week period between latter August and the middle of September. Local farmers and sportsmen put on the drive to control the animals, which were causing great havoc in local chicken houses.

WITH THE CLUBS

ODE TO A LOST HUNTER

By FRANK D. BROWN

A little bird just told me
He saw a curious sight
Away out in the deep dark woods
On a black and dismal night.

A funny anemic little man
In a checkered lumberjack
Sat huddled up against a tree
Wishing his friends were back.

This little man was scared to death—
Sobs shook his slender frame,
His eyes were twice their normal size,
His choppers clicked in shame.

Then the wild beasts gathered 'round him
And licked their chops with glee,
And the little man got on his knees
And for his life did plea.

But the animals just smiled and said,
"We'll give you your liberty,
Cause you've been coming here for years
And never killed a flea."

So that's the big brave hunter
Who talks about big game,
When all the while his four-footed chums
Are calling him by his first name.

DOG SHOW WINNERS

At the Sportsman Field Day of the Lebanon County Federation of Sportsmen, held recently, at Mt. Gretna, the dog show was one of the outstanding features of this event.

Forty-four dogs were entered, many extremely classy in their appearance. The results were as follows:

Pointer—Winnie, "Carrie's Rose Bud," 18 months old bitch, owned by F. M. Luckenbill, Annville; "Rex," 14 months old dog, owned by Richard Boeshore.

Setter—"Ruddy D," 6 year old dog, owned by Margaret and Paul McCarthy, Harrisburg; "Toppy," 2½ year old bitch, owned by Rodney P. Stetz, Myerstown.

Springer Spaniel — "Shelley Jojo," 18 months old dog, owned by Elinor F. Shelley; "Patsy," 18 months old bitch, owned by Almeda E. Nowlen.

Cocker Spaniel—1. "Jerry," 15-month-old bitch, owned by Mrs. J. C. Bassett.

2. "Chenko,"—4-year-old dog owned by Phyllis Peterlain, Harrisburg.

Beagle—1. "Masterly Ringsett Laddie," 2-year-old dog owned by George L. Spangler, Mt. Zion.

2. "Duchess Pearl,"—14-month-old bitch, owned by George L. Schroll, Palmyra, R.D. 2.

Coon Hound—1. "Hunter," 5-year-old dog owned by H. F. Soulliard.

Bassett—"Bicks Tuck," 3-year-old dog, owned by C. V. Bickelman.

Best dog in the show—"Masterly Ringsett Laddie," owned by George L. Spangler, Mt. Zion.

Judges were two of the finest in Eastern Pennsylvania, Miss Dorothy G. Davis, and Jack Davis, of the Double Dee Kennels, Birdboro, Berks County.

Every dog entered received a gift and the winners were given trophies.

This float of the DuBois Gateway Sportsmen attracted considerable attention.

CENTRAL PENNSYLVANIA TRIALS

Excellent weather supported a huge crowd of enthusiasts who turned out to witness the Annual Fall Trial of the Central Pennsylvania Field Trial Association held September 14th and 15th, over a splendid course on the Hollidaysburg Sportsmen's Association's Club House grounds.

Mr. Daniel T. McGill, Secretary of the organization, reports that the competition was keen in all events, composed of the "Open Puppy", "Open Derby", "Open All-Age" and "Open Shooting Dog", but there was complete satisfaction in the decision of the winners by judges Herman C. Garman, Harrisburg, Pennsylvania, and Claude Spickley, Winchester, Virginia.

Thomas M. Stull, Jr., of Clymer, proves that you can kill small game with a bow and arrow. The groundhog in the above photo fell to the unerring aim of this modern Robin Hood.

FREEPORT CLUB ACTIVE

The members of the Freeport Sportsmen's Club have been working with the farmers in their section and sometime ago they requested a copy each of Bulletin No. 11 and Bulletin No. 16 to send to their farmer friends, along with the following letter, in the hope of creating still further good will between their club and the farmers in the community:

"We are attaching hereto a paid-up membership card of the Freeport Sportsmen Club for the year 1940-41 which was authorized by resolution at a recent meeting of the club, in recognition of your aid extended us in planting "Game Food Plot Mixture" early this spring. We trust you will accept it in the cooperative spirit in which it is given.

"Our group is of the opinion that your membership in the club will greatly assist the sportsmen in their effort to conserve and propagate game as well as develop a better understanding of certain problems, discourtesies and conditions as they arise. We want you to feel that "The Club" is "Your Club" and earnestly invite your criticisms as well as any favorable comment you feel that the Freeport Sportsmen Club has invited.

"The regular meeting of the club is the third Thursday of each month at 8:00 P. M. in the Malta Hall basement, Freeport, Pa. We trust that you will want to attend the meetings which we believe you will find to be sociable and interesting.

"Enclosed you will find two bulletins that will give you a better idea of the constructive work and program we hope to carry out as our group increases. Any questions arising from the reading of these bulletins will be answered to the best of our ability or may be referred to the "Division of Game Land Management, Pennsylvania Game Commission."—R. L. Anderson, President.

There are now at least 212 trumpter swans in the United States. The birds, largest migratory waterfowl in North America, which were once thought to be extinct, are concentrated on the Red Rock Lakes National Wildlife Refuge, Montana, and in Yellowstone National Park Wyoming.

MARCHING FORWARD

Continued from Page 7

Thousands of educational posters were prepared and distributed.

special investigators, and an office training course were conducted. A number of outside guests attended the refresher courses, including the Chief of Game Law Enforcement of Missouri, the Chief Deputy Warden of the Game and Inland Fish Commission of Maryland, and the Deputy Game Warden of Allegheny County, Cumberland, Maryland.

The principal subjects covered during the courses included: Legal Procedure; Game Law Study; Public Relations; Food and Cover Management; Tree and Shrub Identification; Game Management; Bird Identification; Handling Prisoners and Self-Defense; Firearms Instruction; Bounty Claim Instruction; Bounty Pelt Identification; Game Trapping; and Research Developments.

Propagation

Production at the State Game Farms was increased considerably during the two-year period. Records show that 357,147 pheasant eggs were produced, of which 41,350 were shipped to sportsmen. Sportsmen also received 65,067 day-old chicks and 12,889 six-week old birds.

There were 62,967 bobwhite quail eggs produced. Sportsmen received 2,657 day-old chicks and 1,584 six-week old birds. Other eggs produced included 13,697 Hungarian partridge, 5,049 chukar partridge, 8,342 wild turkey, and 375 ruffed grouse. It was possible to ship an increasing number of young pheasants and quail to organized sportsmen's groups which equipped themselves with pens which the Commission designed.

By the close of 1939 the Commission had established 14 wild turkey mating areas. From these areas, located in the true range of the wild turkey, wild-mated eggs were collected. The hens were allowed to hatch and raise their second clutch of eggs and the birds resulting therefrom replenished the population in the surrounding territory. Incidentally, 2,922 of the 8,342 wild turkey eggs produced were collected on the wild turkey areas.

Game Purchases

The game purchase program was expanded and considerably more game was purchased. Purchases during the biennium included 118,078 rabbits; 36,716 ringneck pheasants; 9,780 bobwhite quail; 10,052 Hungarian partridges; 360 raccoons and 50 wild turkeys—a total of 175,035 pieces.

In additon to this amount, which was purchased for general distribution 2,169 bobwhite quail, 792 Chinese pheasants, and 27 Hungarian partridges were purchased to improve the quality of the breeding stock at the various farms.

Live Game Trapping and Distribution

The Commission, assisted by the sportsmen, succeeded in trapping 54,033 rabbits, 5,031 ringneck pheasants, 64 bobwhite quail, 6 wild turkeys, 2,565 grey squirrels, 92 raccoons, and 12 woodchucks from its own propagating areas and from such areas as city watersheds, public institutional grounds, parks, nurseries, farms, boroughs, cities, etc., where no hunting is permitted and distributing them in other public hunting sections of the counties in which they were trapped. The program required the use of 20,181 rabbit traps, 1,757 rabbit carrying crates, 350 raccoon traps, 518 squirrel traps, 215 quail traps, 495 pheasant traps, and 200 pheasant shipping crates, all of which were manufactured for the Commission by the N. Y. A.

The cost of trapping rabbits during the fiscal year of 1938-39 was approximately $.33 each; for 1939-40 about $.45 each. These figures do not include the cost of redistribution. Taking it by and large, it must be admitted that the rabbit trapping program is more than proving its worth. Not only are the native species preferable to imported stock, but they can be secured cheaper.

Game Released

A total of 246,279 pieces of game were released during the biennium, including 172,111 rabbits, 496 raccoons, 2,571 grey squirrels, 122,029 ringneck pheasants, 32,186 bobwhite quail, 12,552 Hungarian partridges, 1,619 chukar partridges, and 1,954 wild turkeys.

Research

Several very important research studies were carried on during the period covered by this report, including a banding and tagging program, through which over 100,000 game birds and mammals have now been banded or tagged, and from which valuable information concerning their movements and other factors have been obtained. A detailed study of the food habits of the native foxes, owls and hawks was continued. Information concerning the effects of various climatic conditions upon many game species was obtained in a specially constructed climatic chamber and activity recorder. Additional information on the production of game in the form of a harvested surplus was gathered from the Commission's controlled shooting test areas.

Various mechanical and chemical means were tried in an effort to aid the wild trapping program. An ecological study is being made on one of the Commission's State Propagating areas in an effort to secure basic information on predation, the exact values of restocking, food requirements, carrying capacities and similar problems. These research activities were financed wholly by the Commission.

Activities mostly financed by the Federal government under the Federal Aid in Wildlife Act included such studies as: The economic status of the fur-bearers and food habits of the skunk and red and grey foxes; a five-year study which should aid in determining the breeding potential of the white-tailed deer and the effects of the various food conditions upon the sex ratio of the progeny and on their physical development; and a general ecological investigation to determine the exact food and cover requirements for small game. This program also included the establishment of a wildlife experiment station at the Loyalsock Game Farm and cooperative studies in game research with the Pennsylvania State College and the University of Pennsylvania.

Public Information

The educational program of the Commission was increased considerably because of a more widespread demand for visual and other kinds of educational material on the part of sportsmen's organizations, women's and garden clubs, service clubs, bird clubs, 4-H clubs, Future Farmers of America, and other farm youth groups.

In order to meet this demand the Commission prepared and released six motion pictures in color depicting its various activities and the bird and mammal life of the Commonwealth. Duplicate sets of all of the pic-

tures were furnished to each of the seven Field Division Supervisors. Members of the Commission and field and staff officials attended upwards of 1,500 meetings of one kind or another during the biennium, reaching a conservatively estimated audience of a million and a half persons.

Three major exhibits depicting the activities of the Commission were displayed in the eastern, the central, and the western parts of the State, and many smaller portable exhibits furnished by the W. P. A. were made available to sportsmen's organiaztions for use at one or two day events.

Over 240,000 silk screen posters urging safety-first, forest fire prevention, protection of game, protection of songbirds, food and cover planting, the flushing bar, winter feeding, etc., were also prepared by W. P. A. art projects and distributed widely throughout the Commonwealth.

Approximately 94,000 bulletins of the Commission, both free and paid, were distributed. Three new educational bulletins were prepared, including 20,000 copies of Bulletin No. 17, "Pennsylvania Bird Life", 100,000 copies of Bulletin No. 18, "Pennsylvania Wildlife", and 10,000 copies of Bulletin No. 19, "The Pymatuning State Game Refuge and Museum". All are profusely illustrated in color and depict the game birds, game mammals, fur-bearing mammals, songbirds, and waterfowl found within the Commonwealth.

Thousands of day-old pheasant chicks were shipped to sportsmen.

Bounty Payments

Bounty payments during the biennium amounted to $120,913.00. This sum was paid for the killing of 19,951 grey foxes, 77,448 weasels, 134 goshawks, and 1,090 great-horned owls. Of the 38,311 claims presented 269 were considered suspicious. Subsequent investigation of them resulted in the collection of $5,890.00 in fines.

Fur-Bearing Animals

The prices paid for all furs during the past two years were much lower than they were during the season of 1936-37 when a record take was reported. The low prices were extremely discouraging and a large number of trappers failed to operate. Naturally there was a decided decrease in the number of fur-bearing animals taken.

The total number purchased by fur dealers during the period covered by this report, and the amount that the fur dealers paid for them, is as follows: muskrats, 620,671—$486,404.51; skunks, 489,753—$326,324.61; minks, 14,927—$87,406.20; opossums, 191,172 — $39,853.82; beavers, 912—$10,402.06; otters, 13—$160.00; raccoons, 53,718—$101,965.58; weasels, 67,513—$21,091.07; red foxes, 10,601—$30,291.55; gray foxes, 16,780—$25,662.46; and wild cats, 22—$18.25. All in all, there was a grand total of 1,465,082 fur-bearing animals taken and the amount fur dealers paid for them totalled $1,129,580.11

Hunting Accidents

The Commission continued its aggressive campaign to reduce hunting accidents using the press, the radio and the motion picture as widely as possible in order to make hunters more safety conscious. Despite these campaigns, however, 94 fatal and 784 non-fatal accidents occurred

The new responsibilities imposed upon the Commission by the 1937 General Assembly to punish careless hunters have produced satisfactory results Many hearings were held in connection with hunting accidents and a considerable number of hunters had their licenses revoked In some of the most serious cases heavy penalties also were imposed.

Game Killed

The game kill as a whole was very satisfactory, over 21,500 tons having been taken during the two-year period. The number of large and small game creatures that found their way into the hunters' bag during the combined seasons of 1938 and 1939 amounted to: Legal male deer, 49,106 (1939 kill only—1938 closed); Legal antlerless deer, 186,243; bears, 919; rabbits, 8,068,460; Snowshoe hares, 2,120 (1938 kill only—1939 closed); squirrels, 2,052,385; raccoons, 74,498; wild turkeys, 11,957; ruffed grouse, 461,724; ringneck pheasants, 988,819; quail, 221,565; woodcock, 90,901; Wilsons' snipe, gallinules and rails, 15,011; grackles (blackbirds), 126,062; wild waterfowl, 60,802 and woodchucks, 324,219. The total kill of all species amounted to 12,733,792, with an estimated weight of 21,659 tons.

This is the first biennium that it was possible to report the annual kill based on the tabulation of reports filed by licensed hunters. The above figures are based on reports filed by 98% of the hunters in 1938 and 98½% of them in 1939. Tabulated reports prove without doubt that the estimates made heretofore by field officers were from 30% to 40% too conservative.

Special Permits

The Commission issued a great many special permits including 369 Taxidermy, 30 Ferret Owners, 3 Ferret Breeders, 398 Propagating, 83 Field Trial, 5 Retriever Trial, 35 Collecting, 240 Fur Farming, 857 Fur Dealers, 99 Fur Dealers Employees, 27 Regulated Shooting Grounds, 94 Roadside Menagerie, 38 Fox Hunting Club, and 139 Archery Preserve.

A Taxidermy Board was also appointed by the Commission to determine the qualifications of those desiring to practice this vocation. Under this examination system the sportsmen will be protected because there is less chance of valuable trophies being spoiled in the hands of unskilled workers.

Regulated Shooting Grounds

The Commission was empowered to issue regulated shooting grounds permits under the Act of General Assembly, approved June 3, 1937, when satisfied that such shooting grounds would not be inimical to the public interest. The Act provides for two forms of operation: (a) Where the owner agrees to make available an open public hunting area equal to at least one half of the area of the regulated shooting grounds with public hunting and access thereto assured; and (b) in lieu of providing additional public hunting area to turn over to the Commission prior to the shooting season 25 percentum of the prepagated or purchased birds for stocking elsewhere.

Under the first plan of operation the owner and his invited guests may kill not to exceed 60% of the pheasant and chukar partridges and 90% of the mallard or black ducks released on the premises each year. Under the second plan of operation the owner and his invited guests may take, by shooting only, all of the remaining 75% of the birds propagated or purchased for shooting purposes. Since the Act became effective until May 31, 1940, the Commission issued 38 such permits including both options, an average of 13 annually. Six permits were issued under option "a" entailing fees of $480.00 and resulting in the opening up to public hunting of an average of 2,112 acres annually. Thirty-two permits were issued under option "b" requiring $1,680.00 in fees and resulting in the turning over to the Commission for stocking purposes elsewhere of 2,808 pieces of game.

Hunting Licenses

The license sale during the past two years was unusually high. In 1938, 654,146 resident,

(Continued on page 32)

Dear Mr. Schmutz — We wish to inform you we do not buy live skunks. We are in the market only for their fur!

FOX HUNTING NOTES By W. NEWBOLD ELY, Jr., M. F. H.

THE Cleveland News reports that in Jackson County there are "an unusually large number of quail this year and an unusual number of foxes too." And in this respect the well-known bird dog expert Harold W. Carlisle writes in the Columbus State Journal:

Ordinarily, you will find the fox hunters contending vociferously that foxes are not the terrible predators they are painted, while on the other side of the debate you'll find the pheasant and rabbit hunters shouting to the heavens that all foxes ought to be eradicated if the supply of birds and rabbits is to be preserved.

"This observer never has been able to convince himself that the fast-running, intelligent and wary fox is nearly as bad along that line as many persons have been led to believe. Undoubtedly he does grab himself a few birds now and then, but so, too, do the hawks, stray cats and a number of other birds and animals too numerous to mention. And the fox sometimes gets blamed for all their dirty work.

"It seems to me that the recent field trials at Jackson sponsored by the Ohio Valley Bird Dog Association and the Pickaway County Bird Dog Club proved rather conclusively that birds can exist even in the same territories where foxes abound.

"This territory around Jackson is one of the best-known fox hunting areas in the United States. And yet, when the bird dog field trials were held there during the latter part of October, covey after covey of quail were flushed by handlers of the bird dogs entered in the trial.

"Outdoors writers 'covering' the event were in agreement that the spot is a 'natural' for field trials because of the abundant supply of birds and the fine contour of the country.

"Along now comes a Columbus fox hunter who also wants to explode the theory that an abundance of foxes means a scarcity of game. He is L. D. Overly of 207 Brehl Ave., who writes: 'I, as a fox hunter, wish to explode the idea that where there are a great number of foxes, there will be a scarcity of game.

"'On the first day of the season, I was hunting on a farm of 100 acres where there were two dens of fox raised, one of four and another of five. Now, in spite of this fact, there were 28 rabbits and several pheasants killed by my party.'"

A good field trial hound may not be like a race horse but "Smokey Joe" winner of the National Leafy Oak field trial has won over $5600 in prize money for his owner, Samuel Tharr, of Dayton, Ohio.

The Centreville (Md.) Record gives this account of the advent of the English red fox to these shores:

"The only fox hunted in those days was the gray one, an animal very different in many respects from his red brother of England. As the State was almost entirely settled by the English, it was more like a great English shire than a colony, it might have been mistaken for one. As the settlers arrived here they brought with them many local attachments, and not the least of these was their fondness for hunting the red fox. They could not become accustomed to his gray brothers. It is to this fact that we owe fox-hunting as it is today, and has always been in England.

"As tradition has it, one afternoon in the hot month of August, in the year of grace, seventeen hundred and thirty, eight sleek and prosperous tobacco planters in the county of Talbot, sat in the cool shade of a broad rambling veranda, which supported as it was by massive pillars and shaded by giant oaks of many generations in age, afforded a comfortable spot to discuss the said difference of hunting the red fox in Merrie England, where four of them were born and hunting the gray one in the land of their adoption.

"The Englishmen, with many a round oath and between sips of such fragrant mint juleps as an 'Eastern sho'' darkey alone knows how to concoct, were declaring that there was as much difference in hunting the two species as there was between a canvas-back and a barnyard duck. The upshot of it was, according to an old tale printed not many years afterwards, that the captain of the good ship 'Monocacy,' a tobacco schooner owned by one of the party was instructed to bring back with him on his next trip to Liverpool, eight pairs of red foxes.

"In due course of time, the animals arrived and were liberated along the eastern shore of the Chesapeake. The occasion was one of much merriment, entertainment and sport. The daughter of the country gentry rode on a pillion behind her brother or cavalier to the great ball which was given at Chestertown in honor of the occasion. They fastened their scarlet cloth riding habits over their white silk ball dresses, and tied their hair, done in an amazing fashion, with a lace kerchief, while their skirts were arranged in such a manner that they would not come in contact with the horse's flanks.

"Everyone witnessed the festivities, from the ignorant country bumpkins, in home spun jeans and white cotton shirt, to the landed proprietor, with his gouty foot done up in bandages. There were many races between the horses of Maryland and Virginia and it is stated that the horses from the latter colony came off victorious. The hour these eight pairs of red foxes were set loose in the barn yards of the Maryland farmers may safely be reckoned the birth of genuine fox-hunting in this country. The way the foxes multiplied was marvelous, but they did not emigrate into Virginia until the hard winter of 1879-80, when all the waters of the state were a sheet of ice. So intense was the cold that many native birds froze to death.

DEER DOPE

The proposed deer hunting trip with only muzzle guns used, has gone far past the stunt or novelty stage. It's in such a state now that we KNOW there will be a party of huskies—and light weights—go into northern Pennsylvania for the first day, which is December 2nd.

We promised data on how to dress and generally disport oneself, so here goes—and the data is from an old friend and a hunter who knows his way about.

Sezze, "Non-resident hunting license good for everything in season, from grouse, rabbits and snipe to bear and deer, costs 15 bux. You can get a camp with only cooking and eating tools furnished—you bring bedding and the ingredients for biscuits and what goes alongside. Numerous homes cater to parties of hunters, furnishing breakfast, supper and a packed lunch for noon, along with sleeping accommodations. This way it costs about two-dollars per day. (Bed rooms cold as—as You Know What!) Then again, going it deluxe, at a very low price considering, a number can go to any of several towns where small hotels cater to hunters . . . . from some of these a fifteen-minute drive puts the party into the heart of hunting country.

"Hunting may be by drive or pot-hunting. Local guides come reasonably—about $5 per day. (Then this chap mentions several places which are OK'd by him and not far from Williamsport.)

"Clothes are a big and important item. Weather conditions are uncertain about December first. It can be as cold as billy-be . . . and on the other hand it can be as balmy as April. The answer is—Come Prepared. Heavy wool underwear, with long legs and arms (Who's got 'em these panty-waist days?—Ed.), are the ticket. Wool breeches are worth their weight in bullion. They should be red and black check and plenty heavy . . . checked to identify a hunter from a deer. Wool sox—and I don't mean silk-and-wool—but the regular heavy hunting sock. Rubbers, with 14" to 16" tops, are better than leather pac boots, as they afford a good sole grip on slippery going and are warmer. Have a heavy hunting shirt—woolen—with either a heavy duck hunting coat with room for one to three sweaters underneath, or a heavy wool mackinaw such as is put out by Woolrich knitting mills. Top it off with a cap with ear flaps to keep the noise-catchers warm, and have all of it plenty red. Caps are made, as you know, interchangeable, red and duck—but mine is all wool and red. (Red like that can never be mistaken for a deer—not if the hunter is awake and sober.—Ed.) Heavy mittens with a slashed palm on the shooting hand, to get the trigger finger through, about completes the outfit, but, before taking these mittens into the woods, be sure to practice getting the fingers out in a hurry and under the excitement of seeing your deer running away, because it is very annoying not to be able to do this in a hurry, as occasion demands.

"With an outfit such as above described which, while it may be a little expensive as to first cost, will last a life-time; will serve the purpose by permitting you to pile it on when necessary and peel it off when the weather is warm. A good hunting knife—not too big—with about a 4-inch blade, is OK. Compass and a piece of light, but strong, rope, about twenty feet long, about completes the necessities. The rope comes in handy for dragging a dead deer, hanging him up while gutting and to hang yourself in case you become discouraged and decide to end it all."

Well, fellers, there is the list. Most of us will already have part of it . . . some will have to slip out a few simoleons and make some purchases. Even if I like the way my friend (his name's Jack Haberstroh) labors to assist us in the matter of an outfit, I DON'T like his crack about the ultimate, possible use of that rope! — Reprinted from Muzzle Blasts.

"Shucks! and I thought it was a 'No Hunting' sign."

JITTERBUG BIRD

If you ever see a bird about the size of a small hen spinning dizzily upon some pond or lake, don't send for the wagon. It's not crazy—just a phalarope, a species that inhabits the Pacific Coast section and certain inland states. When a phalarope gets hungry, he selects a likely looking shallow pond and whirls around on the water at great speed. The whirling stirs up the bottom and reveals crustaceans and other forms of aquatic life which are hidden in the mud. As these delicacies come to the surface, the phalarope dines upon them to his liking.

TOO FUR NORTH?

Popular belief has it that only in the cold countries of the far North are good fur animals to be found. As a matter of fact, furs can come from too far north. For instance, the fur of the average Canadian muskrat is the poorest of all the rodent furs in wearing quality. This is attributable to the fact that in cold weather the Canadian muskrat absorb their own fat for food, which thins the pelt and impoverishes the fur.—From the National Wildlife Federation.

CROCODILES

The crocodile is the largest of living reptiles, the most numerous in the species and the most widely distributed. The alligator, which is a member of the order crocodilia, family crocodilidae, is found even in China. The Chinese version is a small species, about 6 feet in length—and the nearest living relative of the Mississippi River alligator! Even scientists agree that this is more than strange. —From the National Wildlife Federation.

TANNING BUCKSKIN

Continued from Page 3

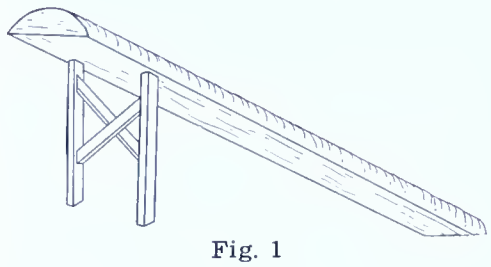


Fig. 1

So much for equipment.

Now, to prepare the hide for tanning: If it is a dry hide, first soak it in cold water until it is thoroughly soft and pliable. Then throw it over the beam and, with the knife, scrape off every bit of flesh, foreign matter and that thin layer of membrane which lines the flesh side of the skin. This scraping process is a very important step in the tanning procedure. If there is anything left on the hide it will prevent that spot from taking the tan properly. So scrape it down all over to the actual hide. In using the beam, place the hide over it at the upper end. Allow the edge of the skin to hang down over the end. Shove your body against the beam end, holding the hide between it and yourself. Then scrape down and away from you, pushing the knife forward. After scraping what you can reach handily, shift the hide to a fresh spot.

When the skin is thoroughly cleaned, it is ready for the dehairing process. For this, a lime solution is used. Get one pound of unslacked burnt lime. Slake it in a little water, then add a couple of quarts more water, the same as in making whitewash. Do this the day before the hide is ready.

These directions are all for one average-sized deer hide. If more hides are to be tanned at the same time, simply increase the dope accordingly.

Now put five or six gallons of water in the tub. Be sure both tub and water are clean. Pour in the previously slaked lime and stir until well mixed. Then put in the cleaned hide. Be sure the hide is completely covered by the limewater.

Leave the hide in this limewater until the hair will slip off easily. This will take from a few days to two weeks, depending on the weather. Warmth makes it work faster. Stir up the hide and suds it around twice a day so that the lime will act equally on all parts of it. Test it occasionally. It has been in long enough when you can push the hair off easily with the hand. At this stage take it over the beam and scrape off the hair with the back of the knife. It should slip off clean, without requiring any special effort. If the hair resists to this treatment, return the hide to the limewater for a few days.

And why throw this hair away? It makes an excellent camp-bed pad, when washed, dried and quilted down between duck or ticking covers. Deer hair not only retains its resiliency wonderfully well, but it will beat almost any other material in keeping out cold and dampness. The hair from two or three deer will make a bed foundation that one will go far to equal.

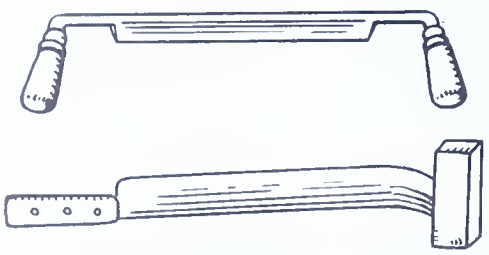


Fig. 2

After the hair has been taken off, return the hide to the limewater for three days. This is to loosen the grain.

To have good buckskin necessitates taking off the grain. This grain is a very thin layer on the hair side of the skin. Take it on the beam and go over the entire hide with the knife, scraping this thin layer off smoothly. Use a sort of shaving motion, with the knife held square enough not to slice into the hide. It may cling stubbornly, especially on the neck and shoulders, but bear down and take it off nevertheless. When this grain is all off, turn the hide over and work on the flesh side, taking off everything that will possibly come, and forcing the limewater out of the skin.

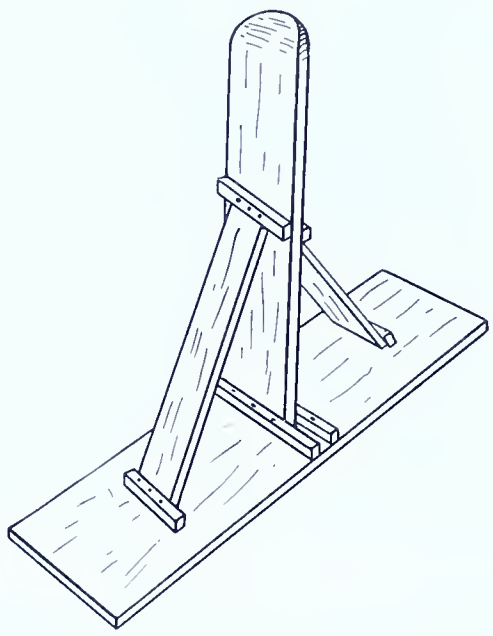


Fig. 3

Here I might add that after handling the limed hide, the hands should be thoroughly washed with soap and water, then rubbed well with vinegar, to prevent soreness.

Next step is the deliming. Rinse the hide in clean, cold water. Then soak it in cold water for about eight hours, sudsing it around and changing the water every two hours.

In the meantime, wash out the tub and into it put four gallons of cold water to which has been added ½ ounce of latic acid. When the hide is properly soaked out, put it into this acid bath. Leave it in there for 24 hours, stirring and sloshing around frequently.

At the end of this time take the hide out and again scrape it thoroughly on both sides over the beam. Work out as much water as possible and scrape off any bits of grain still clinging to either side. All this extra scraping results in nicer leather. Now rinse again in several waters, finally leaving it in fresh water overnight. This makes it ready for the actual tanning.

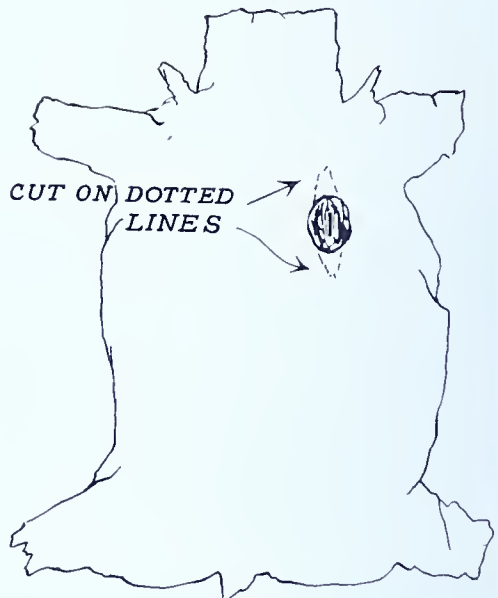


Fig. 4

There are innumerable good tanning formulas impossible to cover in one short article. The one given here is simple, dependable, makes exceptionally soft and durable buckskin, and is as nearly foolproof as any I have tried. It leaves a hide which is easily worked and which doesn't harden badly after being wet.

To compound this tan, dissolve one large bar of brown naptha soap in one gallon of hot water. When dissolved, and while still hot, stir in one pint of neatsfoot oil. When mixed thoroughly, set to cool.

Rinse the tub clean again and pour in this cooled liquor. You will probably have to stir in a little more water—enough to cover the hide. Squeeze what water you can out of the freshly soaked hide and immerse it in this tanning liquor. Leave it there for four to ten days, depending on the weather. Stir it up each day.

In mentioning weather, four days are enough for average summer warmth. Cool weather, but not freezing, requires ten or twelve days. Don't let it freeze. A warmer temperature gives the best results.

At the end of this time take the hide out and let it drain into the tub overnight. Next morning hang it up in a warm, airy place. It is best to pin it to a line or hang it between two hooks, so it will dry evenly. Let it hang until dry spots begin to appear. It will show a lighter color when it dries, and these dry spots will turn white when stretched between the hands.

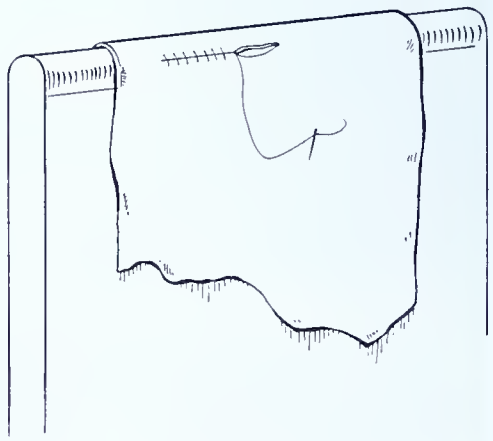


Fig. 5

As soon as these dry spots begin to appear to any extent, it is time to start working the hide; that is, rubbing it soft. Do not let it dry hard. It is impossible to soften fully dried hard spots at this stage. If this should happen, it is necessary to return the hide to the tanning liquor and resoak it.

For working the hide we use the hide stake (Fig. 3). Set it between the knees and hold down solid by placing the feet on the baseboard. Now place the flesh side of the hide over the rounded end of the stake and, grasping it with a hand on each side, work it back and forth over the sharpened wedge-shaped edge. Work it in all directions, pulling, stretching and scraping. This is necessary to break up the fibers of the skin so it will stay soft. All this working must be done while the hide is drying, at that period when it is no longer wet, yet still damp and streachable. Use plenty of pressure—you can't hurt the hide. The harder you work it, the better the finished leather will be. Continue this working as fast as the drying spots appear, until the entire hide is dry. When fairly dry, take it over the beam and go over the flesh side with the back of the knife. Give it a good scraping, bearing down hard.

When the hide is fully dry, and worked as soft as you can get it, put it back in the tub of tanning liquor and leave it the same length of time as before. Then take it out, drain, dry and work soft again, repeating the previous procedure.

This second soaking and working are necessary for choice buckskin. Don't think one double-length period in the tan will do. That between-times working is essential.

When the hide is dry and softened from this second working-out, it will likely be very ill-shaped, baggy in spots and ruffled around the edges This calls for shape-stretching. Moreover, it needs a good stretching to pull out any lingering stiffness.

For this, lay the hide down flesh side up and go all over it with a coat of heavy laundry-soap suds. Moisten it well—especially the thicker portions—but don't soak it. Now roll it up tight, all edges in, and lay it aside for an hour or so. An extra-heavy hide may require a second moistening.

At this time you may sew up any cuts or holes in the skin. Figure 5 shows the best stitch for this. It is similar to the ordinary buttonhole stitch. Use strong linen thread. For large holes cut out a little V-notch at each end (Fig. 4). This allows for a smoother seam and will require less stretching to pull flat. The following stretching will take care of the small extra fullness caused by drawing the edges of the hole together.

As soon as the moisture has quite thoroughly penetrated the hide, and it is soft and stretchy throughout, it is ready to stretch. Lay it on a flat, smooth surface and tack it down all around. Pull out every bit of stretch you can get in all directions. Set the tacks every couple of inches and distribute any extra fullness around the edges evenly between them. Then leave it in a warm place until it is bone dry. This will pull out any puckers and unevenness.

When perfectly dry, pull it up and rub soft. It will have some stiffness from the moistening. but this is easily worked out.

In case you prefer darker leather, you will have to dye it. Natural buckskin is white. Two good dyes are green alder bark and green walnut hulls. The bark will dye tan to dark brown; the hulls smoke to nearly black. For a medium shade of either color, soak a gallon of bark or hulls, broken up fine, in four or five gallons of water for several days. Strain off this liquid for the dyeing. Put the hide in the dye water after taking it out of the tan the second time, and just before the last working-out. This is the only time it will dye properly. And don't leave it in the dye too long; not over 24 hours. The dye has a tendency to harden and coarsen the hide if left overlong.

All this isn't as intricate as it sounds. Once into it you will find it quite easy. And may pride of craftsmanship cause you to view that next buck in the light of a hand-tailored jacket instead of a mouse's nest.

METHODS AND OPINIONS

Continued from Page 15

A confused deer loses all sense of direction and caution. Invariably they try to escape from the drivers only to be shot by the watchers who remain quiet while the drive is in progress. Personally I prefer more quiet drives, where subdued signals are given, because if a deer is not killed when he is "bushed" he starts legging it for all he's worth, and a streak of lightning is not a good target to say the least.

The percentage of drivers, usually camp hunters, who protest an open doe season are undoubtedly in the minority. They are well acquainted with the food problem because they inspect their cabins and survey their hunting grounds at regular intervals. They realize that during the summer months food is more plentiful although there is little surplus. They know that deer exist rather than live during the three months succeeding the hunting season. They understand that any wild animal that does not have a protective layer of fat during early fall may die of malnutrition and exposure before the winter months have passed.

But, for those of you **who do not go hunting** yet sincerely believe an open doe season would constitute a serious handicap in perpetuating the deer herd, there is but one solution. Survey an area which you are intimately familiar with in any of the recognized deer counties.

The appropriate time to conduct such a survey is during the winter or early spring. Examine the tips of small trees and berry bushes. They will be eaten off by hungry deer. Notice the absence of buds on the trees, within reach of the deer, and remember they cannot climb a tree. The spruce, pine, hemlock, maple, poplar and aspen seedlings will appear deformed and "scraggy". Why? Because the deer have eaten every digestible fiber on them.

If you doubt that the animals are hungry, cut a few tall saplings and in a short time half the deer in the county will be feeding upon them.

Is it, or is it not, a coincidence that small game has definitely decreased in certain areas, in spite of closed seasons and reduced bag limits, as the deer herd has increased? Snowshoe hares have been protected, yet have failed to increase under their normal range—the deer range. Grouse are decreasing in many sections.

When any species of bird or animal is given the protection afforded them in this state and yet fail to increase it is not a question of reducing natural enemies, closing seasons, or reduced bag limits—it is because they lack the proper natural foods and cover.

If the present deer herd is to be retained the forests will have to be managed properly. This would provide a new growth of dense underbrush which in turn would provide food and cover for all forest wildlife. But you cannot do that overnight. Therefore you must, of necessity, reduce the deer herd! This would insure future possibilities for valuable timber and a controlled watershed, plus an abundance of small game and fur-bearing animals. It would also insure a well regulated supply of spring-fed streams which insure future fishing possibilities.

Problems such as these require the most serious thought and cooperation of every hunter and citizen of our state. We must accept the facts and govern our opinions without regard to sentimental reasons. To replace facts with fallacies is to violate nature's basic law.

We need "dyed-in-the-wool" sportsmen and sportswomen. Men and women who hunt for the pursuit not for the kill. Not for a perfect score but for the contest. Hunters who hunt for the pleasure of **earning**; for the thrill of **pursuing**; not for the thing itself.

From Texas comes the story of a donkey that trailed deer. No one can explain it, but Old Whitey, a Boy Scout camp burro lifted his nose one day and took off into the brush followed by Scoutmaster Lee R. Tassick. The donkey, feeling his way carefully lest he snap a twig or click a stone, took Mr. Tassick to a sleeping doe and fawn. Mr. Tassick was amazed and decided to put Whitey to a real test. The next day he set out early in the morning and let Whitey take his own course. Again and again the flop-eared animal repeated the performance, locating 13 deer by nightfall. Nimrods wished that Whitey could be rented or purchased but were all advised that he is a camp fixture and hunts only for fun.

The elk herd on the Wichita National Wildlife Refuge in Oklahoma probably could lay claim to American amateur high jumping championship if the animal world had an athletic association. Recently a three-year-old bull elk ran thirty yards and cleared a nine foot fence with ease. According to Ranger William E. Drummond, of the Fish and Wildlife Service, this is the first time in his 18 years of experience on the refuge that an animal has hurdled the high plank fence enclosing the corral. The elk's hind feet touched the top of the enclosure, but the animal landed right side up and unhurt on the other side of the fence.—Current Conservation.

THE 1939 GAME KILL REPORT

Continued from Page 13

tion on the number of days hunted. The tabulation of these reports has revealed some interesting facts as follows:

No. of Hunters Reporting	Kind of Game Hunted	Number Days Hunted	Avg. No. of Days Per Hunter	Percent
25,607	Big game only	94,771	3.7	6.7
145,178	Small game only	844,479	5.8	38.0
211,729	Both small and big game*	2,226,613	10.5	55.3
382,514				100%

*(Small game — 1,432,752 days, 6.8)
(Big game — 793,861 days, 3.7)

If it can be assumed that the above calculations provide a safe guide by which to estimate the percentage of our hunters who hunt big game only, small game only, or both big and small game, then it follows that slightly less than 7% of all our licensed hunters hunt big game only, 38% of them then hunt small game only, while 55% hunt both big game and small game.

Another rather striking figure derived from this tabulation is that those who hunt **big game only spend an average of 3.7 days** per man in the enjoyment of such sport; that those who hunt **small game only spend a average of 5.8 days** per man in pursuit of species other than big game; and that those who hunt **both small game and big game average 10.5 days** per man, or an average of one day more of hunting than those who hunt either small game or big game only combined.

It is evident that the 55% of the hunters who hunt both small game and big game are those who have more time for hunting. It is interesting to observe that this group of hunters spend an average of one day per man more hunting small game than those who enjoy small game hunting only, while those same hunters (the 55% group) spend exactly the same amount of time big game hunting (3.7 days) as do those who hunt big game only.

The 382,514 hunters who gave us this information enjoyed a total of 3,165,863 man-days (separate days hunted) of hunting. If this same average held true for the entire 661,314 licensed hunters in 1939, the license holders in Pennsylvania last year devoted a total of 5,469,066 man-days to hunting, during which time there were 5,990,219 pieces of game taken. None of these computations take into account the amount of hunting or the game killed by farmers who did not secure licenses.

We have never attempted to break down the kill into occupation groups, or the percentage of the kill by the hunters who have more time to hunt as against those who hunt only occasionally. It is suspected, however, that the hunters in the former group bag a very large percentage of the game.

According to the game-kill tabulation, during the 1939 hunting season 15% of the licensed hunters did not kill any game, the same percentage as in 1937. This includes not only those who were unsuccessful but also those who bought licenses and did not have an opportunity to hunt.

Hunters Cooperating

In the Sepember 1939 issue of the Pennsylvania Game News there was published an article "What Becomes of Your Game-Kill Report", and a limited number of reprints of this article are still available. In this article the background of unsuccessful attempts over a period of many years to obtain game-kill reports in worthwhile numbers and the reasons for the present successful reporting system are set forth. Therefore, it is not necessary again to relate these facts.

The Commission's decision to approach this matter in an educational way is producing very satisfactory results, as revealed in the three-year comparative statement below:

	1937	1938	1939
Number of game-kill reports filed voluntarily	418,566 (69%)	527,075 (80%)	589,734 (89½%)
Number of special reminder notices mailed	189,064 (31%)	132,454 (20%)	68,780 (10½%)
Percent of game-kill reports received — based on final tabulation	93%	98%	98½%
Percent of licensed hunters turned over to field officers for investigation	7%	2%	1½%

The sportsmen are to be commended for voluntarily boosting the filing of their game-kill reports by an average of 10% each year since 1937, thus making it possible to show a corresponding decrease in the percentage of the special reminder notices mailed to tardy individuals. It is hoped that it will be only a comparatively short time until at least 98% of our licensed hunters file their reports voluntarily without the necessity of incurring the expense of mailing special reminder notices. In this goal—helping the Commission to help the sportsmen—the Commission solicits the wholehearted cooperation of all sportsmen.

Marching Forward

(Continued from page 15)

7,582 non-resident and 2 alien non-resident licenses were issued; and in 1939 based on preliminary reports to June 1, 1940, records showed that 651,371 resident, 8,988 non-resident, and 3 alien non-resident licenses were issued. Non-residents of thirty-five states hunted in Pennsylvania during the two-year period.

In order to make it easier for Game Protectors and landowners to apprehend game or trespass violators, the numerals on the hunting license tag were increased in heighth from 1 inch to 1½ inches. It is now possible to record license numbers at a greater distance and with more accuracy.

Accounting

In order to increase efficiency and effect economy in the handling of an increased volume of work the accounting system was revised. Modern electric bookkeeping and accounting machines were installed, making it possible to keep this work up to date and balanced at all times. This system also makes it possible to furnish currently detailed information to field officers which heretofore was prepared manually, and which slowed up investigations, particularly on bounty claims.

Financial Operations

Time and space do not permit a detailed account of the financial status for the period covered by this report. However, I might say that during the first year the sum of $1,486,826.37 was credited to the Game Fund, and during the second year the revenue amounted to $1,530,085.34 or a total of $3,016,911.71. Expenditures during the first year amounted to $1,445,091.80, and the second year $1,500,122.03, or a total of $2,945,213.83 for the two-year period. The revenue of the Commission was greater during the biennium than during any other like period, the increase in the main being occasioned by the sale of many more hunting licenses.

While most forms of American wildlife have diminished in the advance of civilization, the rodents, with a few exceptions, have increased . . . groundhogs, for instance, have actually become greater in number as forests were cut and fields were cleared for the plow.

IS IT IS, OR AIN'T IT?

The bassarisk, or civet cat, or ringtail cat, or the same animal known by more than a dozen different names, but scientifically dubbed bassariscus astutus, is a fur animal in Louisiana—according to law. But, whether there has ever been one taken alive and wild in that state is a moot question.—From the National Wildlife Federation.

PUTTING THE HEAT ON NATURE

Hatching and raising trout is a complicated business, ofttimes involving the passage of much time before the eggs are hatched and the resultant fish of sufficient size to be released in streams and brooks.

Government scientists at the federal hatchery in Spearfish, North Dakota, recently worked out a way of making nature itself help speed up the process. The method consists of heating the water in the rearing troughs, using natural gas which is plentiful in the vicinity. It has been learned that heating the water speeds up the hatching and makes the baby fish larger and healthier.

Because of the speeding up process, less food is required to bring the trout to proper size so money as well as time is saved.

OBEY THE LAW » » » HELP YOUR PROTECTOR

Stop the cheater by reporting his license number! — Automobile license numbers will help too!

The vast majority of Pennsylvania's hunters are real sportsmen, and observe the law. They can help themselves by reporting promptly those who violate.
(Use the list below:)

DISTRICT GAME PROTECTORS

COUNTY		Phone
Adams	Leo Bushman, 264 Baltimore St., Gettysburg	
Allegheny	R. A. Liphart, 334 E. 11th Ave., Homestead	1550
Armstrong	R. H. McKissick, 129 Rebecca St., Kittanning	785
Beaver	J. B. McGregor, 1099 Turnpike St., Beaver	1508
Bedford	John S. Dittmar, Loysburg	7
Berks	Joseph Leiendecker, 18 Berks Place, Wyomissing, Reading	4-2713
Blair	C. C. Brennecke, 2520 21st Ave., Altoona	2-6974
Bradford	Rodman C. Case, 927 Main St., Towanda	337
Bucks	S. Earl Carpenter, 41 Taylor Ave., Doylestown	5168
Butler	Troy C. Burns, N. Main St. Extension, Butler	32100
Cambria	E. B. Thompson, 396 Coleman Ave., Johnstown	F35911
Cameron	Max N. Ostrum, 321 Third St., Emporium	4482
Carbon	W. C. Achey, 311 First St., Weatherly	4741
Centre	Thomas A. Mosier, 120 N. Spring St., Bellefonte	38
Chester	J. E. McCannon, 83 S. 5th Ave., Coatesville	191
Clarion	H. J. Updegraff, Shippenville	61
Clearfield	Frank E. Couse, 11 Weaver St., Clearfield	1354
Clinton	M. L. Reeder, R. No. 1, Lock Haven	108
Columbia	M. L. Hagenbuch, 295 Penn St., Bloomsburg	692
Crawford	G. W. Keppler, 255 Locust St., Meadville	1146
Cumberland	J. M. Foreman, 239 W. South St., Carlisle	2341
Dauphin	M. P. Motter, Colonial Park, Harrisburg	55528
Delaware	B. J. Davis, 436 E. Baltimore Ave., Media	295
Elk	E. L. Shields, Eshbach Road, St. Marys	5341
Erie	John G. Kennedy, 238 E. 22nd St., Erie	03-213
Fayette	T. T. Schafer, 16 Wilmington St., Uniontown	3794
Forest	Carl B. Benson, Tionesta	189
Franklin	Wm. W. Britton, 573 E. Catherine St., Chambersburg	193
Fulton	I. C. Baumgardner, S. 2nd St., McConnellsburg	22
Greene	J. F. Blair, 123 N. Richhill St., Waynesburg	267
Huntingdon	T. F. Bell, 407 16th St., Huntingdon	158
Indiana	O. M. Pinkerton, 21 S. 12th St., Indiana	1934
Jefferson	L. J. Haney, Brookville	366R
Juniata	H. W. Fisher, 611 Washington Ave., Mifflintown	176
Lackawanna	F. E. Jenkins, Layton Road, Chinchilla	367R2
Lancaster	J. M. Haverstick, 711 College Ave., Lancaster	5740
Lawrence	F. L. Coen, R. No. 5, New Castle	5211
Lebanon	Philip H. Melching, 409 Cannon St., Lebanon	681
Lehigh	Wm. A. Moyer, 25 N. 18th St., Allentown	2-6739
Luzerne	Samuel K. Weigel, 75 E. Bennett St., Kingston	7-5382
Lycoming	F. F. Crosby, 1442 Memorial Ave., Williamsport	2-7313
McKean	Wm. J. Carpenter, Anderson St., Mt. Jewett	2521
Mercer	Duane E. Lettie, 113 W. Market St., Mercer	6
Mifflin	R. E. McCoy, 317 Logan St., Lewistown	2916
Monroe	A. N. Frantz, 75 Elk St., E. Stroudsburg	1272
Montgomery	Ambrose Gerhart, 141 Central Ave., Souderton	873
Montour	B. P. Yeager, 66 Queen St., Northumberland	1210
Northampton	M. D. Stewart, 1535 Northampton St., Easton	2-2023
Northumberland	B. P. Yeager, 66 Queen St., Northumberland	1210
Perry	H. H. Groninger, New Bloomfield	80
Philadelphia	E. W. Stucke, 7806 Verree Ave., Phila. Pilgrim	4813
Pike	J. H. Lohmann, High St., Milford	240
Potter	A. G. Logue, 107 W. First St., Coudersport	278
Schuylkill	John Spencer, Orwigsburg	
Snyder	C. F. Walker, Beavertown	16R31
Somerset	J. S. Shuler, 354 W. Garrett St., Somerset	
Sullivan	R. E. Latimer, Muncy Valley	15R2
Susquehanna	W. D. Denton, New Milford	16
Tioga	L. H. Wood, 3 Eberenz St., Wellsboro	1961R
Union	F. S. Fisher, 400 Green St., Mifflinburg	6257
Venango	W. T. Campbell, 523 Liberty St., Franklin	1107
Warren	George L. Norris, 1007 Conewango Ave., Warren	2939
Washington	C. C. Stainbrook, 52 Harrison St., Washington	566
Wayne	M. R. Miller, 50 Stanton St., Honesdale	676
Westmoreland	R. D. Reed, (Actg.) 1610 Ligonier St., Latrobe	1140W
Wyoming	Albert A. Wargo, 161 E. Tioga St., Tunkhannock	3671
York	A. C. Ganster, 520 Girard Ave., York	7434

Space does not permit listing the Game Protectors on special assignment, those in charge of Land Management, and the large corps of Deputy Game Protectors.

PLEASE REFER TO INSIDE OF COVER FOR ADDRESSES OF FIELD DIVISION SUPERVISORS.

LARGE GAME AND FUR-BEARING ANIMAL SEASONS

(AS FIXED BY GAME COMMISSION AT MEETING OF JULY 11, 1940).

LARGE GAME	BAG LIMITS Day	BAG LIMITS Season	SEASONS Open	SEASONS Close
Bear, over one year old by individual (See 10 counties closed below)*	1	1	Nov. 18	Nov. 21
Bear, over one year old by hunting party of five or more*	2	2	Nov. 18	Nov. 21
Deer, both sexes, **except those with only a visible spike antler or antlers without points**	1	1	Dec. 2	Dec. 14
Deer, as above, by hunting party of 6 or more	6	6	Dec. 2	Dec. 14

★ NO OPEN SEASON—Deer with only a visible spike antler or antlers without points, Elk and Cub Bears. ★

FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates).

Minks	Unlimited	Nov. 1	Jan. 31, 1941
Otters (By traps only, in 6 counties)*	4	Nov. 1	Jan. 31, 1941
Muskrats (By traps only)	Unlimited	Dec. 1	Dec. 31
Beavers (Traps only; 2 7counties closed)*	3	Mar. 1	Mar. 15, 1941
Opossums and Skunks	Unprotected	until Sept. 30, 1941	

*SPECIAL COUNTY REGULATIONS

FUR-BEARERS—(Traps not to be placed before 7 A. M. on opening dates).

RACCOON TRAPPING—No Raccoon trapping in Beaver, Berks, Bucks, Butler, Cambria, Carbon, Chester, Dauphin, Delaware, Lancaster, Lawrence, Lebanon, Lehigh, Mercer, Montgomery, Northampton, Northumberland, Philadelphia, Schuylkill, Snyder and York Counties.

BEAR—No Bear season in Adams, Bedford, Blair, Cumberland, Franklin, Fulton, Huntingdon, Juniata, Mifflin and Perry Counties.

OTTER TRAPPING—Otter trapping only in Lackawanna, Monroe, Pike, Susquehanna, Wayne and Wyoming Counties.

BEAVER TRAPPING—Beaver trapping in all counties except Armstrong, Beaver, Bradford, Cambria, Cameron, Carbon, Centre, Clearfield, Columbia, Fayette, Greene, Indiana, Jefferson, Lycoming, McKean, Montour, Northumberland, Potter, Schuylkill, Snyder, Somerset, Sullivan, Tioga, Union, Washington, Westmoreland and Wyoming. One person may set and tend 10 traps only.

SNARES—Snares without springpoles may be used for taking predators only in Cameron, Clarion, Clinton, Elk, Forest, McKean, Pike, Potter, Susquehanna, Warren, Wayne and Wyoming Counties, between December 16 and March 31, 1941.

SAVE A LIFE
SAVE A FINE
375
LOOK BEFORE YOU SHOOT
PENNSYLVANIA GAME COMMISSION

PENNSYLVANIA GAME NEWS

Happy New Year to You

JANUARY 1941 TEN CENTS

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PENNSYLVANIA GAME NEWS

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EDITORIAL

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SAFEGUARDING OUR HERITAGE

NEVER before in the history of this country have our natural resources assumed such tremendous economic importance. They will assume even greater economic importance during the next few years if they are conserved and safeguarded.

The Commission's job, the sportsman's job, and the farmer's job, is to see that they **are** conserved and safeguarded. It is an important job—one that requires serious thought and wholehearted cooperation on the part, not only of the Commission, the sportsman, and the farmer, but of every citizen of this State and Nation.

Distant horizons are filled with ominous clouds. Nation is pitting itself against nation; thousand upon thousands of people are being ruthlessly destroyed by the machines of war, and more thousands will have been destroyed by the pangs of hunger.

Upon our great natural resources depends our very lives. We must preserve our forests in order to preserve our waters and our soil. We must impound our water, we must purify our streams, we must manage our wild creatures so that they will become increasingly abundant. If we lose our soil we lose everything.

However, to accomplish all these things we must admit the inter-relationships that exist between the various resources. We must avoid any narrow-minded attitude or opinion that our one problem is to furnish so much game for the hunter to shoot, so many fish for the angler to catch, so many bushels of grain for the miller to grind, so many trees for the lumberman to saw.

We must recognize the ever changing conditions of Mother Nature, and attempt to keep those conditions balanced. Wild creatures are essential to the forests, and vice-versa; forests are essential to good top soil; good top soil is necessary to produce the food we eat; song and insectivorous birds are essential to the crops we grow. We cannot afford to disregard or waste any one of them.

The year 1941 is before us. It offers untold and unlimtied possibilities for pooling our interests, to protect and perpetuate the fundamental resources of our national defense. Sportsman and farmer cooperating with a unity of purpose can do much good; if they fail to cooperate they can do much harm.

Last year many sportsmen's organizations and local landowners worked together to mutual advantage with the result that each group was much wiser from having understood, appreciated, and helped solve the other fellow's problems.

We are a strong Nation, we are a strong people. We have been made so because of the outdoor recreations we are free to enjoy. In this modern world of ours, with its uncertainties and the casual indifference manifested on the part of many of its people, those who do not give **serious thought** to the needs of tomorrow, and who say "it can't happen to us", may awake some day to find themselves faced with the stark reality of having to depend entirely upon the very things which their casual indifference left unguarded.

ATTENTION! — DON'T FORGET YOUR GAME-KILL REPORT

Photo by Wm. Drake

WHEN GAME NEEDS FOOD

EMERGENCY WINTER FEEDING

By The Editor

THAT many kinds of game can be successfully fed and carried through severe winters has been demonstrated upon more than one occasion. I have known of coveys of quail that were fed daily at improvised feeding stations by farmers from the time the hunting season ended in the fall until the crocus started making their appearance in the spring. I know of several flocks of wild turkeys that obviously would have had a difficult time for about three of the coldest weeks we had last year had it not been for an energetic, systematic winter feeding program carried on by a 4-H club. Those flocks were brought through the winter in much finer shape than they otherwise would have, if they came through at all.

Wild creatures have a lot more stamina than the average person realizes, and for the most part they can carry on under normal winter conditions without supplimentary artificial feeding. But in emergency cases, when everything is covered with snow and ice for long periods of time, their resistence is lowered considerably, consequently they are not always in the best physical condition for reproduction when the next mating season comes around.

Emergency winter feeding campaigns, properly supervised, are to be highly encouraged; and they can be carried on by many groups, including sportsmen's associations, Junior clubs, 4-H clubs, and other groups interested in the preservation of wildlife. The success of any program, however, depends upon the interest and enthusiasm of the individuals concerned, upon the system adopted for the particular locality under consideration, and for the essential follow-up work which is necessary after the program has been started.

Last year a 4-H club in Cumberland County established an emergency feeding program, placing stations widely, though not too widely, separated over a large area. These stations were replenished several times each week as the need arose.

I recall another instance where a group of individuals packed several hundred pounds of grain into the mountain, scattered it promiscuously over a rather limited area, primarily because the day was cold and the going was tough, and returned believing that they had done their daily good turn. They might just as well have stayed at home.

For those interested in carrying on constructive emergency winter feeding programs this year, it might be well to stress a few essential factors which should be taken into consideration.

In the first place, it is very important that food is placed at or near the particular spots where previous observations indicated that the game for which it is intended is living. Bobwhite quail, for instance, are more or less restricted in their range, and a farmer can usually tell you just about where you are likely to find the birds during certain periods of the day.

Wild turkeys also have a limited range, and here again you are likely to find them frequenting chosen places along open spring runs, in cleared areas in the deep woods, and other favorite spots. If you plan to feed grouse you'll probably be successful if you place the food under some cover formed by evergreen trees, in thickets of laurel, rhododendron or weeds, patches of scrub, or grapevines.

Lean-tos or other types of shelters can be quickly and hastily erected, and in mountainous areas should have southern exposure where the snow melts quickly and where subsequent bare spots provide ideal feeding areas. Natural shelters, if large enough, can be used but usually these are covered during periods of heavy snows, therefore artificial ones must be furnished.

Wire baskets feeders are excellent for many types of forest game. Squirrels use them extensively, and much of the grain falls to the ground where it is picked up by grouse and wild turkeys. Shelters erected before emergencies arise have tremendous value if they are constructed properly and are high and strong enough to withstand heavy drifts. I remember one snow-fall, however, that completely covered in the neighborhood of a dozen shelters built by a local Boy Scout troop, and they had difficulty in locating and opening them up.

It is not always necessary to make use of shelters in placing food, and in certain instances it may even be inadvisable to do so. Experience has demonstrated that a very satisfactory method of feeding wild turkeys and other woodland game is by placing ear corn on the stub end of a small sapling cut off about two feet above the ground, or on a stick forced into the ground upon which the ear of corn is fastened. The intention is to keep the corn above the snow. Squirrels may be successfully fed by placing ears of corn in cavities or crotches of trees. Shocks or unhusked corn may be placed conveniently for use of squirrels and other game. Squirrels eat out the "eye" of the kernel, leaving the rest as food for other species.

A desirable arrangement for placing ear corn can be made by driving long nails or spikes through a board in several places and tacking the board to a tree or to a fence. A number of ears can thus be placed in one location.

A great variety of feeding shelters have been experimented with on game refuges and elsewhere, but those mentioned are the more practical types, and most of them lend themselves to innumerable variations suitable to different conditions and depending on materials available for construction.

The habits of predatory birds and animals should by all means be borne in mind when food for game is being placed, particularly when artificial shelters are used. Provision should always be made for the easy escape of game animals or birds so that they will not be cornered and caught within the shelter. Never less than two entrances or exists should be provided.

Various species of predatory animals—foxes, wild cats, weasels and the more valuable fur bearer, mink—are quite apt to find a feeding station where game is feeding and in turn feed on the grain-fed game. If this occurs, either the vermin should be trapped or the placing of grain at the station discontinued.

Care should be exercised not to attempt to draw too much game in a section to one feeding place, for vermin will profit by it at the expense of the game. Numerous small feeding shelters, artificial or natural, are far better than a few large ones.

The abundance of deer in many sections of the State makes the winter feeding of small game a difficult problem, for a very few deer may eat quickly the grain intended for turkeys, grouse, and squirrels, although buds and twigs on which deer should browse may be fairly plentiful. To overcome this difficulty some feeders should be designed primarily to keep the grain beyond the reach of deer.

New Commissioners Appointed

On December 6, Governor Arthur H. ames appointed two new members to the Game Commission. One of them, Hon. O. Benj. Gipple, Harrisburg, succeeds the late Hon. Frank B. Foster of Phoenixville, whose untimely death is announced elsewhere in this issue; the other, Hon. George Irwin Phillips, Alexandria, succeeds Hon. William G. Fluke of Saxton, whose term expired. Hon. John H. Price, Scranton, Vice-President of the Commission, whose term had expired, also was reappointed.

The Commission and its staff, as well as the sportsmen of the Commonwealth, extend hearty congratulations to these new Commissioners, both of whom are already well known in conservation circles.

Unfortunately, announcement of these appointments came too late for other than this brief mention in GAME NEWS. However, we hope to be able to tell our readers more about the new appointees in the February issue.

Thousands of ducks and geese visit the sanctuary every spring and fall.

THE PYMATUNING

A Paradise for Nature Lovers

PYMATUNING LAKE, the wildlife paradise of which Pennsylvania sportsmen, biologists, school groups, nature lovers and other outdoor enthusiasts dreamed for many years, is located in western Crawford County, Pennsylvania and in eastern Ashtabula County, Ohio. This beauty spot with its varied assemblage of plant, bird and animal life is rapidly becoming one of the greatest recreational and wildlife study centers in the eastern United States.

A great many centuries ago, and of course long before the white men ever heard of what we now call America, this large reservoir was not an artificial lake such as we now see it, but a real lake, natural in every way. As time went on and nature worked one of its little understood miracles, the lake dried up leaving nothing but a swamp and a stream bed called by the Indians "Shenango Creek".

In 1934 the state completed construction of the dam across the Shenango River near Jamestown, primarily for flood control in the valleys of the Shenango and Beaver Rivers and to provide sufficient water during dry seasons of the year for domestic and industrial use in these valleys. This gigantic project cost $3,750,000 and produced a reservoir in area the largest in Pennsylvania. It has a shore line of 70 miles and floods 17,000 acres, of which 4,740 are in Ohio. The original swamp included in the flooded section comprised an area of 10,400 acres. Lands acquired for the project total almost 25,000 acres.

Creation of a lake so large as this furnished the Game Commission with an opportunity sportsmen had long desired—establishment of a large migratory waterfowl refuge. While Pennsylvania had long ranked high in restoration of upland game, because of its physical features it had contributed very little to the nation-wide program to conserve and increase migratory waterfowl. And the numbers of these had been dwindling fast, despite every possible effort on the part of the Federal Government to restore them.

It is universally considered by conservationists that the solution of the wild waterfowl problem is the creation of areas for sanctuaries and breeding grounds, strict regulations and good enforcement, accompanied by the closest possible cooperation between State and Federal agencies. Here was recognized an opportunity to cooperate with the Federal Government in its effort to conserve migratory waterfowl by providing these birds with a most desirable and necessary resting and feeding refuge area with a resulting protection from over-shooting. Such assistance results in sending back to the big breeding grounds in the north a larger number of wild fowl, with an attendant increase in the crops of succeeding years.

What made the area particularly desirable for the establishment of such a refuge is the fact that the State is situated on the Atlantic Flyway, one of the four main paths of migration on this continent. The western edge of this flyway, roughly parallelling the coastline, swings sharply to the northwest in the Shenandoah Valley with the effect that the path broadens and includes all of Western Pennsylvania. Since individual birds persist in taking the routes used by their ancestors it is an obligation in behalf of our continental resource of migratory waterfowl that any state so situated contribute to their perpetuation.

Because of the writer's intimate acquaintance with this area for many years, both before and during construction of the dam, its potential possibilities for the sportsmen and nature lovers of the state were quickly recognized. One of the first things given consideration upon becoming a member of the Commission in March, 1935 was to suggest its immediate further development for wildlife, especially in the interests of migratory wild waterfowl.

In the fall of 1935 the Commission established what is known as the Pymatuning Wild Waterfowl Refuge, comprising 2,500 acres of water and 1,170 acres of marsh and land. The area included within the refuge is formed by utilizing a fill, that is actually a second dam, across the original Pymatuning swamp, constructed to carry the Linesville-Jamestown road and the Pennsylvania Railroad. By means of a spillway the water of this upper reservoir is kept at an almost constant level, thus providing excellent conditions for aquatic plants which provide waterfowl and shore birds with food and concealment. Fluctuations in the level of the lower reservoir are such that aquatic and marsh plants, except the floating kinds, could not survive in periods of low water. No hunting, fishing, or trapping is permitted within the upper lake or refuge area. This assures an area where waterfowl can rest and feed unmolested by man. It has been found necessary at different times, however, to reduce the number of muskrats by trapping because their abundance became a menace to the aquatic plants so necessary as food for wild waterfowl. Muskrats likewise feed on this material and when too plentiful destroy it rapidly. Some of these were used for restocking depleted areas in the vicinity of Pymatuning.

Soon after the upper reservoir filled, in March 1934, natural stands of marsh plants and certain kinds of aquatics quickly made their appearance. Twenty-one low islands, varying in size up to several acres are scattered here and there throughout the part included within the refuge and provide nesting sites as well as food and cover for waterfowl. Much of the shore line supports a growth of shrubs which provide food and cover and other parts of this shore line includes desirable nesting sites for waterfowl and upland game. Small lagoons and marshy bayous extending within the strip of land surrounding the water area of the refuge form alluring places for species that segregate in colony groups and for the young birds. Parts of the upper end of the refuge area because of its dense growth are almost impenetrable for man but provide an excellent retreat for waterfowl.

It was realized that the kinds and amounts of aquatic plants that grew naturally were insufficient to provide the migratory birds with an adequate food supply, consequently plans were made for increasing this with planted material. Because of the acidity of the water soon after the creation of the dam, plantings were made carefully and on an

By Robert Lamberton*

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experimental basis in order to determine the kinds of aquatics, which provide good waterfowl food, would grow most successfully. As the acid condition disappeared the plantings were increased in numbers and extent. The excellent natural conditions, plus the development work which has been carried on, through our Division of Game Land Management, have resulted in making this one of the most attractive wild waterfowl nesting, resting and feeding areas in the East.

Planting in the water area of the refuge prior to 1938 consisted of 52,000 aquatic plants and 750 pounds of seeds of aquatics. During the fall of 1938 a total of approximately 188,000 aquatic plants was placed in the refuge area, as well as several hundred pounds of seed and more than 100 bushels of seed spores. In 1939 the plantings were further increased by using almost 540,000 aquatic plants in the refuge and in the lower dam. In addition to this 10,000 bulbs, 2,000 roots and several hundred pounds of seed were planted. Aquatic plantings for 1940 are not completed at this writing, but it will total over 500,000 plants as well as a quantity of seed. All of the planting was done with WPA labor and most of the material was transferred from mashes in the general vicinity of the refuge, where not needed, to areas in the refuge adapted to the particular type of plant. Materials planted included, among others, wild celery, sago pondweed, floatingleaf pondweed, pickerelweed, bur reed, smartweed, northern naiad, duck meal, duck's meat, wampee, wild millet, sweet flag and wapato duck potato. The plantings were made at favorable spots in different locations in the water and marsh area and have made a very good showing. Many species have spread while others have came up a great deal thicker. As new plantings are made they are placed in sections where no food bearing aquatics are now growing.

To further augment the food supply both for waterfowl and upland game many thousands of shrubs, vines and trees are planted at suitable locations each year, largely through the cooperation of WPA. Likewise each year approximately 75 acres of grain are planted in the fields surrounding the upper reservoir and on Ford Island. From these planted crops more than 1,000 bushels are harvested each year for feeding waterfowl during the spring and fall migrations and for winter feeding of upland game in the vicinity Much of the crop, however is left standing in fields conveniently accessible to wildlife, both migrant and resident. Thousands of birds feed on these crops which include such grains as corn, wheat, kaffir corn, buckwheat, duckwheat, millet and soy beans.

The number of waterfowl that nest and rear their young on the refuge increases year by year, and several new species have been noted annually. During recent seasons the following birds were observed nesting in varying numbers: mallard duck, black tern, pied-billed grebe, black duck, blue-winged teal, gadwall, shoveller, pin-tail, ring-necked duck, redhead, ruddy duck, baldpate, American bittern, least bittern, great blue heron, green heron, black-crowned night heron, king rail, Wilson's snipe, sora rail, Florida gallinule, American coot, woodcock, killdeer, semi-palmated plover, wood duck, bald eagle and Canadian goose. The redhead and ring-necked ducks were newcomers to this vicinity in the 1937 season and the baldpate first appeared in 1938. Ordinarily nesting in Central Canada and North Central United States, their presence indicates that the refuge has been developed into an excellent nesting place and that it will be used more extensively each year. The horned grebe, common tern, Virginia rail, black rail, northern phalarope, and many others were also present during the nesting season, but no nests were found. In additon a great many other species visit the area commonly or at rare intervals. The sanderling was first observed during the fall of 1940.

To assist in attracting wild geese to the area, 30 pinioned birds were received from Maryland and released August 27, 1936. In addition to these 30 immature geese were received from the Fisher Game Farm October 13, 1938. The first geese received raised young at the refuge and these migrated that same fall. It is quite certain that several of these birds return to the refuge each year and raise young. The number of geese raised at the refuge increases each year. During the summer of 1940 approximately 200 were

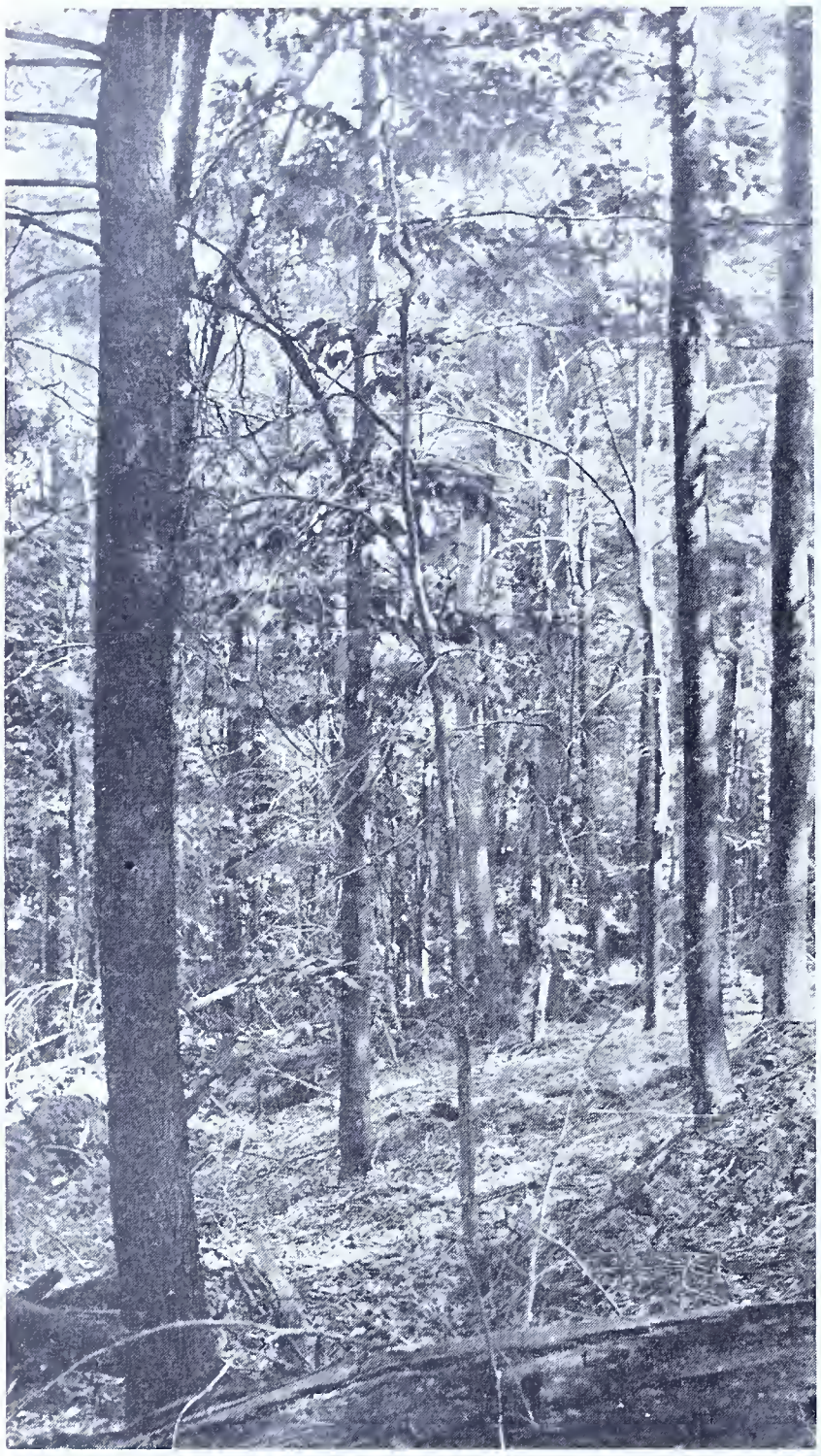
(Continued on Page 27)

*Member, Pennsylvania Game Commission.

An educational museum was completed in 1938. Thousands of persons visit it annually.

Over two hundred specimens of waterfowl and shorebirds are on display in the museum.

The Federal



A Forest Tract in Warren County being purchased with the help of Federal Aid-in-Wildlife Restoration Funds.

STATE game agencies, and consequently sportsmen, throughout the country are receiving material benefits from the Federal Aid in Wildlife Restoration Program resulting from the passsage by Congress in 1937 of the Pittman-Robertson Act. This act is considered one of the most beneficial measures for wildlife conservation and development adopted by Congress in recent years, and in all probability the most constructive of its kind since the passage of the Migratory Bird Treaty Act in 1918.

The passage of this act well rewards concerted efforts made by conservation organizations throughout the United States to develop a cooperative Federal-State program to check the depletion of one of the nation's most valuable natural resources, wildlife, many species of which furnish recreation and sport for millions of hunters throughout the United States.

The act is based on the principle that the Federal Government can and should materially contribute in the Nation's wildlife program. Unfortunately, comparatively few States are in the more or less enviable position of Pennsylvania, in that they have been unable to cope with the wildlife situation because of insufficient funds. Pennsylvania's funds are none too abundant, and good use could be made of more money, but other States on the average are in far worse condition than Pennsylvania. It is a recognized fact that increasing interest in outdoor recreation, largely due to the improvement of roads, has added to the heavy drain on the Nation's wildlife resources, especially game animals and birds.

The Pittman-Robertson Act is designed to aid in restoring natural conditions so that wild birds and mammals can live and reproduce normally, thus perpetuating human enjoyment of their presence, and providing an annual surplus to be harvested by hunting.

Funds

The source of Federal Aid to Wildlife Restoration Funds is the 10% excise tax imposed by the Federal Government on firearms, shells, and cartridges, which produces approximately $2,750,000 annually. While this income is earmarked for wildlife work, none of the money is available until Congress makes specific appropriation to the Federal Aid in Wildlife Restoration Fund. Congressional appropriations for distribution to all of the States have been made for each of the last three Federal Government fiscal years, which begin the first of July.

For the fiscal year beginning July 1, 1938, the appropriation was $1,000,000, of which Pennsylvania's apportionment was $46,025.99. The following year the appropriation was increased to $1,500,000, and Pennsylvania's apportionment was $72,400.42. For the present year Congress was more liberal and increased the appropriation to $2,500,000, almost the entire estimated revenues from the excise tax on guns and ammunition. Pennsylvania's apportionment this year is $119,218.65, making a total to date of $237,645.06. Of this allocation, the Commission has already received nineteen United States Treasury checks amounting to $84,521.64, all of which were, of course, deposited in the Game Fund. The remainder of the allocation will be remitted from time to time as projects progress or are completed.

How States Qualify to Obtain Federal Aid Funds

No State receives an apportionment of such Federal Funds until its Legislature has passed an act agreeing to the provisions of the Pittman-Robertson Act. Governor Arthur H. James approved Pennsylvania's enabling act on May 26, 1939. The State's laws for the conservation of wildlife must include a prohibition against the diversion of license fees paid by hunters for any other purpose than the administration of its wildlife work. In Pennsylvania this applies only to the work of the Game Commission. The Fish Commission can not participate, as the Pittman-Robertson Act clearly limits projects to those concerned with the selection, restoration, rehabilitation, and improvement of areas of land or water adaptable as feeding, resting, or breeding places for wildlife, and does not include fish because the excise tax is paid by hunters, not fishermen. However, fishing interests benefit indirectly although substantially by environmental improvements made to lands and waters intended to directly benefit waterfowl.

Under the terms of the Pittman-Robertson Act the United States may pay up to 75% of the cost of a project, with the understanding that the other 25% must be paid from the State's own funds.

Method of Allocating Funds to the States

Of the appropriation to the Federal Aid in Wildlife Restoration Fund, the Fish and Wildlife Service of the Department of the Interior, formerly the Biological Survey of the Department of Agriculture, makes deductions for administering the act. This deduction amounts to $90,000.00 annually. The balance of the appropriation is apportioned to the States on the basis of half in the ratio of the area that each State bears to the total area of all the States, and half in the ratio that the number of paid hunting license holders of each State bears to the total number of paid hunting license holders of all the States. Each year the Game Commission certifies to the Secretary of the Interior the number of paid license holders in Pennsylvania during the previous year.

Any portion of the appropriation apportioned to any State for a given fiscal year remaining unexpended at the close thereof can be made available for expenditures in that State until the close of the succeeding year.

If a State is to avail itself of the benefits of the act, it must annually notify the Secretary of the Interior of its desire to participate within sixty days after receiving certification of the ap-

* Member, Pennsylvania Game Commission.

Aid in Wildlife Restoration Program

*By Samuel C. Castner**

IN COLLABORATION WITH W. GARD. CONKLIN

portionment of the funds. Funds allocated to States and not used can not be apportioned to other participating States. Such unused balances under the act are made available for expenditure by the Secretary of the Interior in carrying out the provisions of the Migratory Bird Conservation Act.

Types of Suitable Projects

A basic requirement of the act is that all projects shall be substantial in character and design. Depending upon objectives, they embrace activities in three principal groups, as follows:

1. **Acquisition of lands.** Lands so acquired in Pennsylvania are added to our splendid system of State Game Lands, and used for the rehabilitation of wildlife.
2. **Development of lands.** In Pennsylvania funds for development projects are applied particularly to State Game Lands in an effort to make them more suitable for the production of increased quantities of wild mammals and birds. Development may reasonably be interpreted to include any project that would make better wildlife management possible, but at least one should center particularly around environmental improvements by food and cover planting, water stabilization, or other activities necessary to accomplish the purpose.
3. **Research projects.** Such projects are intended to help solve pressing wildlife management problems that involve unknown factors in management, in feeding habits, and in inter-relationships of the various species to livestock production and farming operations, and which are concerned with the innumerable things entering into the wildlife management program.

All lands acquired under the provisions of the Pittman-Robertson Act become the property of the respective States. In Pennsylvania, titles are secured in the name of the Commonwealth, for use of the Pennsylvania Game Commission, and have exactly the same status as lands purchased entirely from the Game Fund.

Any structures which might be built, or equipment purchased from Federal Aid in Wildlife Restoration Funds likewise become the property of the State.

Submission and Approval of Projects

Before the Fish and Wildlife Service or the Secretary of the Interior will approve the expenditure of any of the State's apportionment of Federal Aid in Wildlife Restoration Funds, a preliminary project statement must be submitted by the State concerned. The purpose of the project, and how and where it will be conducted, as well as estimates of cost must be incorporated. If the project contemplates the acquisition of land, the Game Commission submits copies of Land Purchase Contracts, maps showing the boundary lines and location of the tracts concerned, estimated costs for making survey of the boundary lines, and for title examining, abstracting, and conveying. For research or development projects, information of a somewhat different character is submitted.

State Game Lands No. 156, Lancaster County. Federal Aid in Wildlife Restoration Funds made possible the acquisition of these lands.

Project applications are carefully studied by competent personnel in the Fish and Wildlife Service in Washington. For a Land Acquisition Project, they have each of the tracts involved inspected and reported upon by one of their own permanently employed officers. Development and research projects are likewise carefully reviewed before approval is granted.

After the Fish and Wildlife Service has satisfied itself the project is legitimate and worthy, a project agreement is prepared and executed jointly by the Federal Government and the State concerned. This agreement clearly sets forth the estimated amount

(Continued on Page 26)

State Game Lands No. 162, Erie County. This tract was acquired with the aid of Federal Funds.

View of State Game Lands No. 165, Butler County, acquired also with the help of Federal Aid in Wildlife Restoration Funds.

November Foods of the Wild Turkey

By
Logan J. Bennett and
P. F. English

[1] *Paper No. 22 from the Pennsylvania Cooperative Wildlife Research Unit. Fish and Wildlife Service (U. S. Department of The Interior), The Pennsylvania State College, the Pennsylvania Game Commission, and the American Wildlife Institute cooperating.*

Authorized for publication on October 23, 1940 as Paper No. 997 in the journal series of the Pennsylvania Agricultural Experiment Station.

DURING the hunting seasons of 1938 and 1939, 15 crops of wild turkeys (*Meleagris gallopavo silvestris*) were sent to the Pennsylvania Cooperative Wildlife Research Unit by sportsmen and game protectors for analysis. It was hoped that the data obtained from such an analysis would give the Game Commission and sportsmen additional information as to what should be done to improve food conditions for this great game bird.

Although this is a very meager sample on which to base any conclusions, the writers have written up the analysis for the general interest of the readers of the *Game News*. The crops reported in this article were analyzed by R. H. Gensch, Biologist in the Food Habits Laboratory of the Fish and Wildlife Service, U. S. Department of The Interior.

Vegetable matter constituted 97.7 percent of the food in the crops (table 1). Animal matter made up 2.3 percent of the food (table 2). Gravel was found in 12 of the 15 crops, representing 2.2 percent of the total volume of the crop contents.

This analysis shows that the wild turkey utilizes a great variety of plant and animal foods. The bird is primarily a ground feeder and, to a great extent, uses many of the foods eaten by ruffed grouse and ringneck pheasants (Kuhn, 1940; English and Bennett, 1940).

Many of the important forest foods of the wild turkey and ruffed grouse are also choice foods of the white-tailed deer. Deer, being much more abundant than the turkeys, are direct competitors of turkeys and grouse for the available food. There are numerous indications that the overabundance of deer in many parts of the turkey range is rendering the environment unsuitable for these birds: the deer are taking a great proportion of the food and are overbrowsing essential cover.

The wild turkey's use of wheat and other domestic grains is well illustrated in this short report. Wheat and corn are ideal foods for winter feeding, and in many sections sportsmen and game protectors can greatly assist this majestic game bird by making these grains accessible during the winter.

TABLE 1.—Vegetable matter (97.7 percent of food) in 15 wild turkey crops

SPECIES	Crops in which found	Percent of vegetable volume	Parts used
Wheat (*Triticum aestivum*)	6	39.1	Kernels
Corn (*zea mays*)	5	23.6	Kernels
Oaks (*Quercus* spp.)	12	10.2	Acorns
Grass (*Gramineae*)	11	7.2	Leaves
Wild grape (*Vitis* spp.)	4	4.4	Fruit
Panic grass (*Panicum* spp.)	5	3.1	Leaves
Wild cherry (*Prunus* spp.)	4	2.1	Stones, fruit
Witch-hazel (*Hamamelis virginiana*)	2	1.4	Seeds
Barley (*Hordeum vulgare*)	1	1.2	Seeds
Flowering dogwood (*Cornus florida*)	2	1.0	Stones, fruit
Dock (*Rumex acetosella*)	5	.7	Seeds
Lesser ragweed (*Ambrosia artemisiifolia*)	3	.6	Seeds
Sedge (*Carex* sp.)	2	.5	Seeds
Moonwort (*Botrychium* spp.)	3	.3	Leaves
American hornbeam (*Carpinus caroliniana*)	2	.3	Stones
Buckwheat (*Fagopyrum esculentum*)	1	.2	Seeds
Sassafras (*Sassafras officinale*)	3	.17	Fruit
Oats (*Avena sativa*)	2	.05	Kernels
Figwort (*Aureolaria* sp.)	1	.05	Seeds
Thoroughwort (*Eupatorium*) sp.)	1	.05	Seeds
Tick trefoil (*Desmodium* spp.)	2	.04	Fruit
Smartweed (*Polygonum* sp.)	1	.04	Seeds
Teaberry (*Gaultheria procumbens*)	3	.03	Seeds, fruit
Green briar (*Smilax* sp.)	1	.03	Seeds
Rye (*Secale cereale*)	1	.03	Kernels
Black gum (*Nyssa sylvatica*)	1	.02	Stones
Ground cherry (*Physalis* sp.)	1	.02	Fruit
Hazelnut (*Corylus rostrata*)	1	.02	Fruit
Huckleberry (*Gaylussacia* sp.)	1	.01	Fruit
Rush (*Juncus* sp.)	1	.01	Seeds
Galls	2	*	Galls
Blackberry (*Rubus* sp.)	1	*	Seeds
Brome grass (*Bromus* sp.)	1	*	Seeds
Drop-seed grass (*Muhlenbergia schreberi*)	1	*	Seeds
Clover (*Trifolium* sp.)	1	*	Seeds
Fingergrass (*Digitaria* sp.)	1	*	Seeds
Flax (*Linum* sp.)	1	*	Seeds
Foxtail grass (*Setaria* sp.)	1	*	Seeds
Hawkweed (*Hieracium* sp.)	1	*	Seeds
Nightshade (*Solanum tuberosum*)	1	*	Fruit
Pigweed (*Chenopodium* sp.)	1	*	Seeds
Plantain (*Plantago lanceolata*)	1	*	Seeds
Pokeweed (*Phytolacca decandra*)	1	*	Seeds
Sumac (*Rhus typhina*)	1	*	Seeds
Wild carrot (*Daucus carota*)	1	*	Seeds
Wood sorrel (*Oxalis* sp.)	1	*	Seeds
Unidentified vegetable matter	3	1.2	
Unidentified leaves	5	.35	Leaves
Unidentified bulb	1	.01	Bulb
Unidentified bud	1	*	Bud

* Trace.

TABLE 2.—Animal matter (2.3 percent of food) in 15 wild turkey crops

SPECIES	Times occurring
Millepedes (Diplopoda)	13
Stinkbugs and assassin bug (*Hemiptera*)	12
Crickets, grasshoppers, walking-stick (*Orthoptera*)	9
Beetles (*Coleoptera*)	8
Spiders (*Arachnida*)	7
Wasps and ants (*Hymenoptera*)	6
Centipedes (*Chilopoda*)	4
Butterfly larvae (*Lepidoptera*)	3
Snails (*Gastropoda*)	3
Galls	2
Fly (*Diptera*)	1
Lizard (*Reptilia*)	1
Spider egg case (*Arachnida*)	1
Wasp nest (*Hymenoptera*)	1
Unknown insect	1
Unknown larva	1

Turkeys surviving the winter in a well-fed condition have a better chance to reproduce than birds in a starved condition.

Sportsmen and others can greatly assist the wild turkey by making wheat and corn available for them during winter.

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A Bobtail Pointer in Bird Country

By Robert Osborne Steele

THE day was mild but imparted the feeling of impending fall and the few men, sprawled on the porch of Greer's General Store, had on jackets, but they were thrown open. They could, if they bothered to turn their heads, see doves dipping into fields down the road yonder or if they listened carefully might hear a cock quail calling from the old mill swamp.

Asa Hightower, with his legs wrapped around a chair, balanced himself against the narrow board siding of the store. He raised his head slowly, puckered his lips and arched a thin stream of sweet tasting tobacco over the head of a bony, black pointer stretched out before them.

He marked the accuracy of his cast and then drawled softly, "That there dog came from real people and I'm fixing to send him back."

"You refer to his pappy and old lady," Sam Seeder asked, "or to some of their folks what were visiting last fall?"

"It don't matter," Asa replied, "they were all real people and that's why I'm sending him home.'

There has been much talk as to how Asa got that puppy because he didn't appear until he was near six months old. When he was full grown he began to burn up the country and when Asa won the state field trials with him last fall even the women folks began to talk about the big, black brute.

"It is sure funny business," Asa continued, "'cause the way I figure it one man owned him, the other one should have and I've got him, but I'm giving him over soon as bird hunting starts."

Sam shifted his position and Jim and the others who were sitting down a step or two half turned around, so Asa felt certain of an attentive audience. Curiosity was like a shot of corn, Asa figured. They might drift away later but they would stay awake until he finished.

Having developed a respectful silence, Asa tipped his chair at a more precarious angle and carried on.

"You remember those two city fellows who always came down in the fall for a little hunting?" he asked. "Well, two years ago one of them brought down with him a good looking she pointer and pup. I ain't never got the whole story straight but the pointer needed a rest and some country air and for keeping her the pup was mine."

He paused.

"Now folks don't go around giving good pointer pups away, so I reckoned there was something wrong, but they didn't explain none. All they wanted was the pointer well taken care of."

Asa shifted his position and his glance fluttered over his audience like a hen counting chicks.

"She was a beautiful animal," he continued, "nice shaped head and good ears. A little thin then but we soon fixed that. She had liver markings with a lot of tick and her feet was good size and her chest deep. If she had a nose for birds, which she sure had, you would say she was a dog worth having."

"Well, when they unloaded her from the back of the car out hopped the funniest bundle of meat you ever laid eyes on. I'm talking about that pointer there," Asa emphasized, "but you sure would never have recognized him."

"I'd know that dog anywhere," Sam stated emphatically, pulling his soft hat down over his eyes and settling into a more comfortable slouch. "Who could help remembering him?"

Asa gave his opponent a disgusted glare.

"If you'd a seen him before," he muttered, 'and I know you're referrin' to his tail. But you don't know whether he was bobtailed when he was a pup."

He waited for a reply.

"Sure he was," he continued, "but you didn't know it."

"Just guessin'," Sam said with a grin.

"Well that was it," Asa replied, "he was almost all black except his tail and what he had of it was all white. I sort of suspected that he was kin to the she pointer but since they never said nothing, I didn't know. So I put the two of them in a kennel and pretty much forgot about it all. The pointer got well and fat quick and early the next spring I got a letter asking me to send her back, which I did, but that left the pup."

Asa rolled his cud and selected his points carefully.

"Late in the summer I was fixin' to walk a couple of dogs for exercise and sort of absent minded I opened the pup's kennel and out he came. Dogs look bigger when they can stretch and run and the pup looked full grown, so off we started.

"We didn't have no name for the pup but on account of his tail we called him Bob."

"He was a funny sight, still is I reckon, but that short tail didn't hinder him none. From the first day I took him out he handled himself like a champion."

"Folks say he ran a rabbit that day," Sam interrupted softly. He had a grin on his face like a mule chewing briars.

"That's correct, he sure did and caught it, and that's not all, he brought it back kicking," Asa replied a little hot. "'Taint no harm in a pup running a rabbit if you break him of it. Just shows a nose for game. You got to teach him what game you want."

Sam admitted the reasoning with a grunt.

"Go on," he suggested.

"He took to pointing partridge like he'd done it all his life," Asa continued. "I walked those dogs down by yonder branch; quail like water in the early fall. Both sides of the creek has got heavy patches of briars and I had two coveys marked down there. The old dogs ranged pretty far in the fields on both sides but Bob here took the rough going. He seemed to be able to get through the heavy stuff without too much commotion. Now don't forget he's just a pup and this is the first time he'd really hunted."

"Don't make it too good," Jim suggested with a grin

Asa grunted at the interruption.

"We got up some birds that day," he continued, "but from then on I aimed to make that dog amount to something. Pretty soon he ranged as far as Big Lill and you know she's liable to end up in the next county. Bob always ended up on birds. I took to shooting a .410 over him first but he never blinked an eye. He was steady naturally.

"That fall I killed a lot of birds over him but for the first time in ten years those two city men didn't come down. Whether it had something to do with the pup, I don't know, but they wrote and said they was too busy."

Asa took the quid from his mouth and tossed it out in the road. Bob raised his head slowly and blinked his eyes but with a deep sigh settled his head between his paws for further sleep.

(Continued on Page 31)

By N. R. Casillo

★

The Dog Fox of Possum Hollow

"WILD DOGS?" I enquired of my companion. "Wild dogs," I muttered in wonderment. "No kidding," I asked, "are they actually wild?"

"Sure, sure," reiterated Chet Bauder who had just finished relating the story of their capture. For proper emphasis he added: "Dad Gibson holed them up while fox hunting out around back of Wampum. He and his party fished them out of the den after a tough set-to."

It was difficult to believe that dogs could go wild in as heavily a populated county as Lawrence. The natural instinct of a dog is to seek the companionship of man. But the two dogs captured by Dad Gibson, a well-known New Castle fox hunter, preferred a hole in the ground and to forage for what food they could obtain. And from various and more or less accurate reports, their menu ranged from barnyard fowl to wild game. Several farmers living in that section of the county reported having heard them tonguing on the trail of their quarry on numerous occasions.

Later, when we saw the dogs, they were chained to a workbench in the Gibson garage. Our host, a stranger to me, fearfully grabbed a chain and jerked one of the poor beasts to its feet. The animal displayed not the slightest fear or resentment at the rough treatment. It looked like a minature collie to me (somewhat more than half-grown), and its intelligent but sullen eyes stared fixedly into space. The coats of both animals were as luxurious and soft as a prime red fox pelt and nearly of the same color.

"What's Dad going to do with them?" I asked as a wave of compassion swept over me. After all, they were dogs, and they looked like good dogs to me.

"Shoot 'em—wouldn't do to let them run wild," came the rasping retort, and the animal he still held rolled its eyes. It had detected the note of menace in the man's voice even as I had.

A kind word or two from Chet and the intelligent creature turned his gaze in his direction, and I saw several quivers of the brush-like tail, unmistakable attempts to wag it. Chet reached out to pat its head.

"Look out!" cried our host. "He'll take it off."

But Chet was undaunted and proceded to lay a hand on the furry hair between the dog's ears.

"Wild dogs," I scornfully remarked and strode from the place followed by my equally scornful companion.

"There's no doubt that those dogs are wild," said Chet on our way back downtown, "but, they haven't been getting away with all the poultry that those farmers say they have."

"Yeah, I agree with you," I replied, "but, how are you going to discount the finding of all those bones when they dug them out?"

"They could have taken refuge in a fox den when hard-pressed by the dogs," replied Chet, and incidentally furnishing another angle to the already elaborate yarn.

"I'm inclined to think that a big dog fox is getting away with all the poultry," I remarked. "You recall it was said that all of the raids took place at night, and I can't imagine dogs, wild or otherwise, and scarcely older than pups, getting away with what their accusers claim."

"Now, don't you go getting any hallucinations that wild dogs aren't killers," warned my companion. "They can get away with a lot of game in short order."

"Yes, I know," I agreed. "But, remember that these are young dogs—aw, let's forget it for the time being," I lamely concluded.

A week or so later reports came in from the southern end of the county that depredations on the poultry had increased, and the opinion of many was that more of the dogs were on the loose, possibly the mother and one or two more of her offspring.

The story grew until it took on really ridiculous and to many startling proportions, i. e. that the mother, a small collie, had mated with a big dog fox that was said to live in the Possum Hollow district, and the resulting offspring were therefore crosses of the two. In spite of that biological improbability the Gibson premises were overrun by hordes of the curious intent on seeing the captive animals.

And so that incident of the wild dogs was responsible for our participating in a fox hunt that I shall not forget in short order. A hunt wherein the quarry possessed and practiced all the subterfuges with which it is credited in both song and story; near-human intelligence and quick wit that I had heretofore thought to be the products of sympathetic and imaginative writers.

The section wherein we staged our hunt was a large area of abandoned farmland bordered on all sides by more or less thriving farms. What was once arable land has long been over-run by a veritable jungle of haws, wild apples and weeds. The woodland covering a goodly portion of the northern end of the old farm consists of a splendid stand of

mixed hardwoods. Bissecting what had been rich pastureland is the railroad, running for the most part through a shallow cut.

The stand assigned to me was on a hillock overlooking much of the pasture and a good stretch of the railroad. I was as conspicuous as a lighthouse, but knew that it didn't matter much so long as I remained motionless.

Chet mounted to the highest elevation bordering on the woodland, while Bill Allen, the third member of the party trudged to the grown-over fields at the southern extremity bordering the most prosperous of the adjoining farms. There he unleashed his black and tan hounds, Duke and Gyp.

According to what Bill told us later, Duke struck a hot trail almost immediately after his release, the fresh tracks leading him down along a weed-choked drainage ditch that eventually petered out near a dense hedgerow. There the dog opened up with that mellow bellow that never fails to needle my spine with thrills. Gyp wasn't long in making it a duet.

The canine music swelled and fell on the fluctuating breeze, sometimes disappearing altogether when the trail led them into some declivity. When they had gone beyond hearing I found them with my field glasses working their way across a distant hillside orchard. A minute examination of the area in the vicinity failed to disclose any signs of their quarry.

Upon lowering the glasses the first thing that I saw was a shepherd dog liesurely loping across the pasture, headed in my direction. When it had approached to within a hundred yards of where I stood toying with the field glasses, it suddenly dawned on me that the animal so unconcernedly approaching me was not a dog, but an unusually large fox. Indeed, it was so large as to cause me to stare at it unbelievingly for no little time. At long last I was convinced of its genuineness.

When approximately seventy yards away it began running parallel to me. I went into action swiftly. It required but a slight movement to get my gun into position, but even that was detected by the not-so-sharp eyed creature, for it suddenly swerved, shifted gears and went streaking away as only a fox can.

The two charges of shot that I sent after him only accelerated his speed. In an instant he ducked under a snake fence bordering a tangle of alders and that was that.

"Holy smokes!" I recall exclaiming. "I came near getting myself a fox." And then I noticed that my heels were shaking uncontrollably.

Well, I sat down to sort of ease my excitement and smoked a cigarette while waiting for the dogs to come along.

My cigarette was finished and still no dogs. I could hear them however as they worked along the edge of the railroad cut. Queer, I thought, because it was far from the direction from whence "my" fox had come. I stood up to try my legs and found them all right.

Suddenly from the corner of my eye I caught a glimpse of something moving a considerable distance up the tracks. The glasses showed the object to be a fox. It was approaching at a fair pace even tho' it was walking one of the rails. The cunning animal knew that the cold steel would not retain its scent for long. Farther up the tracks the dogs were fairly tumbling over each other in their eagerness to hold the trail. A slight swell in the terrain kept their quarry out of sight.

Observing that the fox would pass within easy gunshot range if it kept to its course, I accordingly crawled to the very edge of the embankment and crouched low in a clump of stunted willows.

I had scarcely gotten set when the roar of a twelve guage changed the eager but even tempo of the dogs into something resembling the jittery nuances of some of our modern dance tunes. It was Chet. I heard him yell and then saw him frantically waving his arms. I guessed he meant that something was coming my way, so I crouched lower and awaited developments.

HELP!
FEED WILDLIFE

In the meanwhile, the fox on the tracks had taken to the heavy growth on the opposite side of the cut and disappeared with the dogs on its tail. Chet continued to yell and wave his arms. Thinking he wanted me to join him I started up the elevation and was soon by his side.

"What's the matter?" I asked.

"What are those dogs chasing?" he countered.

"A fox of course," I replied.

"A fox," he repeated as a puzzled look crept into his eyes.

"That's right," I came back.

"Then, they couldn't have been on the trail of the one I just shot at."

A crashing of brush interrupted and Bill joined us. 'Hey," he asked breathlessly, "did you pot the one you shot at?"

"Did you see it, too?" asked Chet.

"I'll say. He passed me before I had my gun ready, even before the dogs had warmed up on him Say, you know, those doggone hounds are acting funny," he went on. "You shot at the fox over here and yet, they're over there on the other side of the tracks I don't get it."

"They're chasing another fox," I volunteered. "I saw it take to the brush before it came within range of my boiler."

While we talked the dogs had described a wide circle and had swung back on our side of the tracks. A glimpse of the two animals showed that they were headed for the section that Bill had only recently quit.

Chet suggested that I get back to my post while Bill was directed to a spot half way between us. Chet calculated that if the fox came in our general vicinity one of us would surely spot it and possibly get a shot.

Chet's deductions were correct too, for in about fifteen minutes the dogs turned and headed toward us, bellowing right up through the middle of the pasture. A moment later I saw the fox, streaking toward the woods like a red arrow. Neither of my companions had seen it and soon it had disappeared among the trees.

Then a queer thing happened. When the dogs came to the place where the fox had turned they swerved in the opposite direction and continued pell-mell toward the railroad cut with their cut-outs wide open. I turned my head in time to see another fox slowly trot across the tracks and disappear into the tangled growth. In a few minutes the dogs arrived there and went merrily after. It was obvious that the dogs were dealing with two foxes.

While fox No. 2, we'll say, was keeping the dogs occupied on the other side of the tracks, I signaled to Chet. In a few minutes all three of us were in conference at Bill's post. I expressed my opinion as to what I thought the foxes were doing.

"So, you think they're giving us the double-cross?" asked Chet.

"Those babes are old timers," cut in Bill, "and that's a little game that they're probably been playing for years."

"If that's a sample of what they can do," Chet observed, "then those wild dogs were pikers and took the rap for most of the raiding and killing done by these here foxes."

In the meanwhile, the dogs were swinging back and we made haste to get back to our positions. Before departing Bill suggested that we move farther down the pasture, nearer the point where the foxes crossed the tracks, to confound the dogs.

The dogs were still working down at the far end of the pasture when I settled into my station. They were going strong and the music was heavenly.

When they had again reached the spot where the foxes relieved each other something went awry. Unfortunately the thick brush prevented my seeing what transpired. But apparently each dog took to separate trails, Duke taking the same route that he had already covered on two previous occasions while Gyp went pouring up the hill in the opposite direction.

I waited expectantly, confident that a fox would again cross the tracks. Presently one

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CONSERVATION AND SCOUTING

By J. FRANK RITTER, Jr.*

★

Thousands of wildlife posters were distributed.

EACH YEAR inestimable numbers of birds and other wildlife are saved through the unceasing work of the Boy Scouts of America. Not only do the Boy Scouts work to save wildlife but also to prevent the wholesale destruction of large areas of timberland through forest fires. Often after the forest fire is well on its way of destroying many acres of fine woodland, the Boy Scouts can be seen on the front line of the fire-fighters.

Scouts are taught the value of preserving forests and wildlife; they have the opportunity of taking short courses of study in Conservation, Forestry, Bird Study, Insect Life, Reptile Study, Angling, and many other Merit Badges that teach the true value of Conservation. The Scouts, in turn, can pass this information along to the rural property owner, the farmer, the hunter, and the average citizen. Usually, when a Boy Scout works on behalf of Conservation, he is well aware of the enemies he must deal with and he is equipped with knowledge of how to fight and conquer these foes. He is not just a Scout working for a medal, but an educated Scout working for a cause.

Boy Scouts who give their time and effort for this cause receive no monetary compensation. Sometimes their only reward is the satisfaction of knowing they have helped wildlife and at the same time have helped the citizens of their community. There is, however, an award that is bestowed upon Scouts who furnish evidence of considerable work on behalf of Conservation. This is the Hornaday Medal for "Distinguished Services to Wildlife," and it is indeed a great honor to receive this award.

At the present time your author is working for this award. He is in charge of a large Conservation Program which has been in action for a year, and which has met with wonderful results. The major accomplishment of the program was the creation of over 300 private sanctuaries. Over a length of time, your author visited many farmers and property owners; he would explain to them the benefits they receive from birds and wildlife; he would explain what the results would be if, for some reason, certain species of birds became extinct.

He would inform the farmer how the Towhee destroys large numbers of beetles that would otherwise reduce crops to nothing; that the Song Sparrow's diet consists of three-fourths weed seeds and one-fourth insects; that the Chipping Sparrow feeds almost entirely on insects, worms, and seeds. Many more birds, such as the Chickadee, Bluebird, Catbird, Meadowlark, and Flicker, are almost indispensable to the average farmer. Many farmers are aware of this fact, but there are a few who don't realize how important our insectivorous birds are.

After the farmer is taught the immense value of these birds, he is then shown the most practical plan for encouraging their growth and life. Leaving a few rows of corn standing in the fall often saves many a bird the next winter that would otherwise perish. The corn furnishes food and the corn shocks protect wildlife from the severest storms. Leaving gullies grow brushy furnishes another source of protection for wildlife. Many farmers even go in for building feeding stations. They often make fine stations by piling corn shocks and brush in tepee fashion around the base of a tree; there are several entrances and inside is placed the food.

Feeding stations should be serviced only during the months that snow covers the ground. If a feeding station is kept serviced over a longer length of time, the birds become too dependent upon it for their food, then, if for some reason, the station can no longer be kept serviced, the chances are they will perish as a result of no self-reliance.

Some of the farmers that do not set aside all their land as a wildlife sanctuary—and they should be encouraged to leave some open to public shooting—partition off a smaller area to be used to benefit wildlife. In these smaller areas the improvements that will benefit wildlife are made. The farmers do not allow any hunting in these areas. Many a farmer has been very much surprised by the fine results he has obtained from a little work.

Educating the public at large as to benefits they receive from wildlife is another important action taken by the Boy Scout Conservation Program. This is done in many different ways, one of which is the distribution of some 1,500 posters advocating the protection of wildlife. These posters, which are furnished by the Pennsylvania Game Commission, are distributed over farms, parks, and mountains within a fifty-mile radius of Harrisburg. In Michaux State Forest, which is located within Caladonia State Park, there are over 300 of these wildlife posters distributed. Any farmer or property owner interested in obtaining these posters may do so by simply writing or calling at the Pennsylvania Game Commission office. There is no charge for the posters.

Another important phase of the Conservation Program was a series of Radio Broadcasts over station WKBO. Each week for six consecutive weeks, your author directed and planned a series of interesting, entertaining, and educational broadcasts over this station. Every week there would be a guest speaker who would talk on some branch of conservation. Included in the speakers was a representative of the Game Commission, a newspaper reporter, representative of the Department of Forest and Waters, a Scout Executive, and a prominent sportsman. The broadcasts were arranged through the courtesy of the station.

There have also been several written articles published as a result of this program. A written article entitled "Birds Especially Should Be Rewarded for War on Insects" was published in The Harrisburg Telegraph. Another article entitled "Conservation and National Defense" was published in The Harrisburg Evening News. This article is also part of the program, the purpose of which is to enlighten the public as to the benefits they receive from wildlife and particularly birds. Thus, when the public realizes how important wildlife is, they will more readily and more enthusiastically work in behalf of it.

I have just finished building a large Wildlife Sanctuary. It is located in the Senoff woodland and covers a good three acres.

* Eagle Boy Scout.

The land was leased to our program through the courtesy of Mr. Seno Senoff, the owner. Immediately work was started to transform the dense woodland into a veritable wildlife paradise. Bird houses were erected; bird feeding stations and wildlife feeding stations were built; shelters for the smaller game were built, and a fine nature trail was cleared so that those interested in our work could see what we were doing. The trail leads over the greatest part of the Sanctuary and all along it are placed bird houses, in order that visitors may have a fine opportunity to study birds in their homes. A creek runs by the woods and furnishes an excellent source of drinking water and spots for birds and wildlife to bathe.

A separate branch of the Boy Scout Conservation Program is the Forest Fire Prevention Campaign. It is a well-known fact that Forest Fires destroy more wildlife than all the other causes combined, so separate measures were taken to counteract this destructive force. Over four hundred "Prevent Forest Fires" posters were distributed at strategic locations throughout eastern Pennsylvania. The article entitled "Forest Fire Prevention and National Defense" that was printed in The Harrisburg Evening News was devoted entirely to forest fire prevention. Several of the radio broadcasts contained information in regard to forest fire prevention.

One radio program in its entirety was devoted to information concerning forest fires and their prevention. This talk was entitled "Forest Fire and its Effect upon Conservation." Many stone fireplaces were built so as to lessen the danger of fire spreading from crudely constructed fireplaces. Fire trails were cleared and rubbish containers distributed all as a part of our Forest Fire Prevention Campaign. This Forest Fire Prevention Campaign was only a branch of our Conservation Program.

The material accomplishments of the Boy Scout Conservation Program are as follows:

1. **Three hundred wildlife Pledges signed, thus creating 300 wildlife sanctuaries.**
2. **A series of six Boy Scout Conservation Program broadcasts over radio station WKBO.**
3. **Fifteen hundred wildlife posters distributed throughout Pennsylvania.**
4. **Four hundred "Prevent Forest Fires" posters distributed throughout Pennsylvania.**
5. **Several written articles concerning Conservation published in The Harrisburg Evening News and Harrisburg Telegraph newspapers.**
6. **A three-acre wildlife sanctuary built and maintained through this program.**
7. **The erection of wildlife shelters and feeding stations in several woodlands and State Forests.**
8. **A successful city "Make the Public Wildlife-Conscious" program was carried on. This included the displaying of wildlife posters in over 185 of Harrisburg's stores.**
9. **Instruction concerning how to help wildlife was given to Farmers, Citizens, and Scouts.**

Besides these material accomplishments, many other apparently immaterial accomplishments resulted. In general, the program was a much greater success than was ever expected. It was indeed surprising and gratifying the cooperation we received from everyone connected with our work. Without this fine cooperation we would not have been successful. I wish to take this opportunity to sincerely thank the following men for the fine work which they did for this program: Mr. Charles F. Stambaugh of the Pennsylvania Game Commission; Mr. Michael Seaman, outdoors editor of The Harrisburg Telegraph newspaper; Mr. George H. Wirt of the Pennsylvania Department of Forests and Waters; Mr. Paul E. Wemple, Assistant Scout Executive of the Harrisburg Area; Mr. Charles Fox, well known Harrisburg sportsman; Dave Bennett and Clyde Moser, of station WKBO; Mr. Leo Luttringer of the Game Commission; Mr. Seno Senoff, who so graciously provided the land for our Sanctuary; and to all the farmers who signed wildlife pledges. To these men I heartily express deep gratitude for myself and on behalf of the Boy Scouts of America.

The United States of America is the greatest country in the world. We are proud of our freedom, and justly so. We must maintain that freedom at any cost. We must be prepared to defend that freedom with a military machine second to none. This can be done only when we have resources. Among our principal resources is our forests. From

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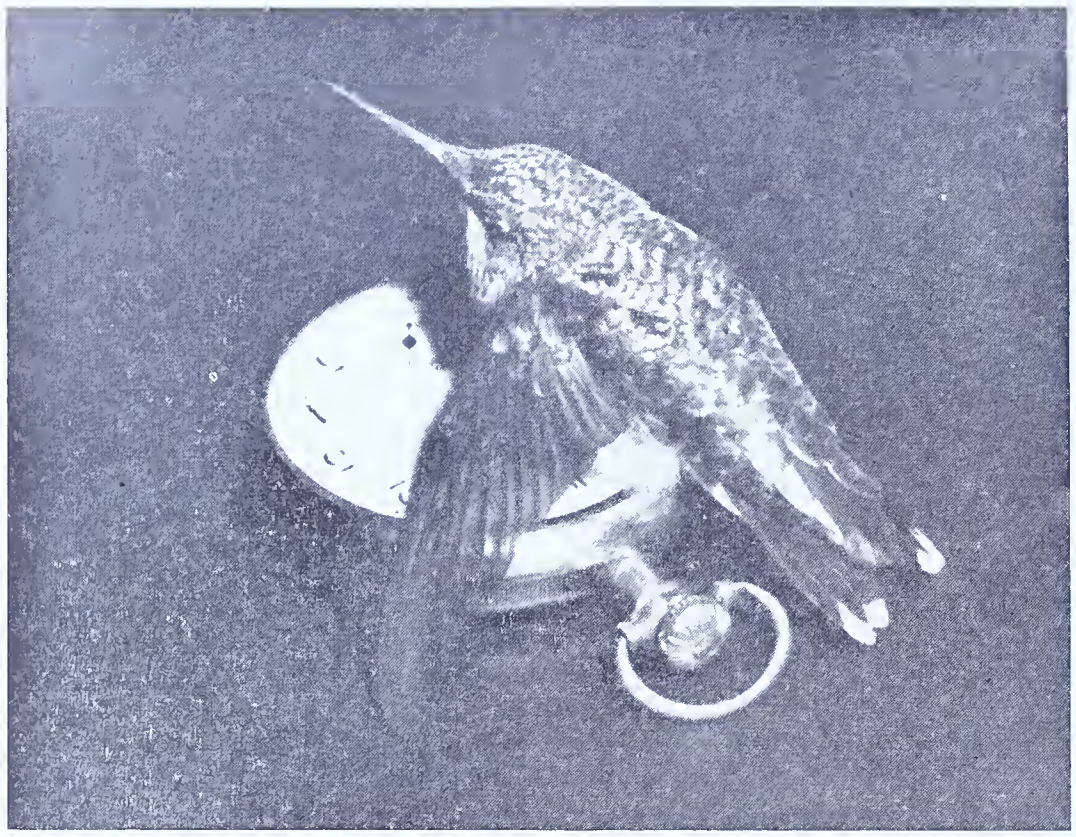
Three hundred wildlife pledges were signed.

Feeding shelters and boxes were erected for birds.

Pictorial



The Hummingbird shown in these pictures was found one evening last summer on the floor of a downtown warehouse in Grand Rapids, Michigan, by Adrian Verspoor of that city. There had been a heavy downpour of rain earlier in the evening and the bird, exhausted and wet, was unable to fly. Verspoor turned it over to the Public Museum where the director's wife, Mrs. Frank L. DuMond fed it diluted sirup. The bird recovered shortly.. Note its size in comparison with common pocket watch.—Photo from Grand Rapids Press, Michigan.

Brown and white skunk at Eastern Penitentiary at Graterford being cautiously observed by one of the trusty's. Photo courtesy Ellen A. Dietrich, Publicity Director, Montgomery Co. Sportsmen's Federation.

Hummingbirds, despite their small size and apparent fragility, can hold their own with most other birds. They have remarkable stamina and tremendous powers of flight. They can be easily attracted to the home flower garden if little glass vials filled with sugar water are suspended from branches or stems. Many excellent photographs, both motion and still, have been taken by them in this manner.

One of the many game feeding stations built and serviced by the Freeport Sportsmen's Club. The little sportswoman in the picture is five-year-old daughter of C. A. Bowden, one of the club members.

Pictorial

Photo Williamsport Grit.

Raymond Wilson, Williamsport, with Albino ringneck pheasant killed in Lycoming County this past season.

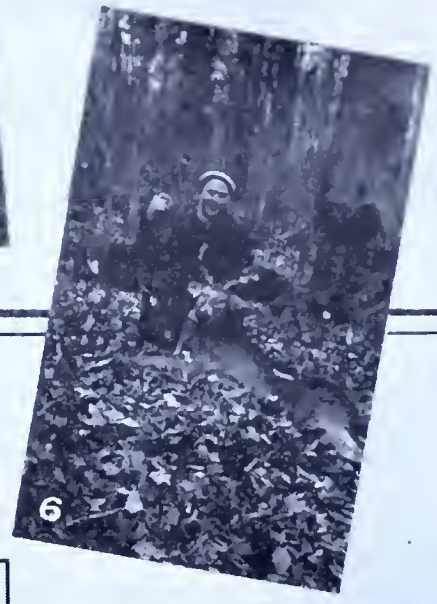
Photo by Game Protector R. H. Morningstar.

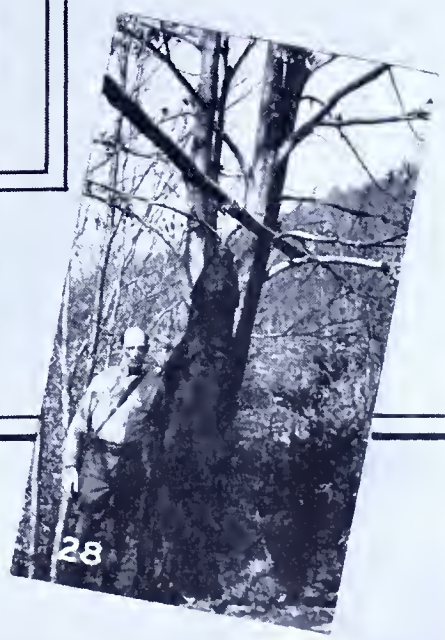
Bear cub found in trap by Steve Franchok, English Center, Pa., who reported it to Game Protector Morningstar. The two arrived at the spot while it was dark. Discovering that the mother was close by, and not too friendly, they decided to wait until morning. When they returned the mother had gone, so they quickly released the little fellow who seemed none the worse for his unusual experience.

This Beagle belonging to Leo Wagner, Natrona Heights, Pa., certainly likes a wide diversity of friends. He shouldn't be lonely with crow, groundhog, and chicken.

Toto, Cocker Spaniel belonging to Louis M. Klein, Union City, Pa., likes to hunt habbits but holds no animosity for his long-eared companion.

1. Members of Camp 210 United Sportsmen of Pennsylvania feeding game last winter. 2. Releasing rabbits. Photo by J. M. Haugh. 3. Paul Campbell, Millersburg, with six point buck taken in Clinton County last season. 4. The end of the chase. 5. Members of the Grantville Hunting Camp and their 1939 season's bag. 6. We would like to know who this happy nimrod is. 7. Here's another group that did their part last winter. Photo by John Wright. 8. The layout man apparently was partial to the hunter in Photograph 6 because here he pops up again in Photograph 8, apparently with his wife. At any rate we'd like to know who both of them are. 9. This deer was found in McKean County by J. C. Grace, of Greenville, and carried into camp. Later it was turned over to the local Game Protector. 10. These members of the Loyalsock Rod and Gun Club appear mighty well pleased at having cracked down one of Bruin's tribe. Photo by J. N. Warner, Indiana, Penna. 11. Nobly retrieved. Setter owned by Bill Douglass, Harrisburg. 12. Bears killed in Sullivan County. Left to right—John Muller, Lester Van Born, Nelson Wetzel; sitting, Richard Eater, Marlin Heim, Harmon West, Thomas Deeter and Charles Huntzinger. 13. J. M. Dietrich, of Wesleyville, feeding a wild deer. He says they were quite wild at first, but later ate from his hand. 14. This dog picture got mixed with a lot of others which were not captioned but we believe they are pups owned by Mr. John Heritscko of Jessup, Pa. 15. James Davis and C. S. Burns, of Northumberland, with two nice wild turkeys. 16. L. S. Huntzinger, of Montrose, with a nice big black one. 17. Trees cut down by beavers in Jefferson County. Photo by Frank Young, Muse, Pa. 18. This photograph was consigned to the Editor's desk without any caption. We should like to know who sent it. 19. Members of the Susquehanna Rod and Gun Club, Wrightsville,





26

Pa., feeding game. 20. Bear shot by Lester Pierce, of Nazareth, Pa., in Forest County. It weighed 392 pounds. 21. Arthur Beal, Chief of Police, Indiana, Pa., with rattlesnake killed while hunting bears on November 16, 1939. 22. Mrs. E. A. Wheaton, was not to be outdone by any male exponent of the hunt. She bagged a dandy. 23. W. F. Burke, Girardville, Deputy Game Protector, placing game food in Schuylkill County. 24. W. C. Seabrook, Hazleton, and his last year's trophy. 25. We do not know who these enthusiastic game feeders are, but we offer them our hearty congratualtions nevertheless. 26. H. C. Goodwin, President of the Ridgeville Sportsmen's Association, setting a box trap for rabbits in South Park, Pittsburgh. This organization trapped many rabbits from this area under the Commision's trapping program last winter. 27. Joe Frontino, Bradford, young 16-year-old hunter with black bear he bagged in Willow Creek district, McKean County. It weighed 462 pounds hog dressed. Photo by Paul Frontino. 28. Homer R. Stewart, Racetown, Pa., with a 300 pounder. 29. Two bears killed by members of the Pittman Branch of the Tri-County Sportsmen's Association. The third bear was killed by an individual and hung up merely for the benefit of the photographers. A bear hunting camp or party is allowed only two bears in a season. 30. Members of the Susquehanna Sportsmen's Association, Liverpool, placing the final poster on the first of a series of special wildlife refuges sponsored by that organization. Two have already been completed with plans for a third under way. Below the sign are from left to right, John Ward, Treasurer; R. E. Wallace, President; Richard Shoemaker, Assistant Secretary. Other officers include Glenn Beecher, Vice-President, and Ira Wolfgang, Secretary.

MEMBER OF COMMISSION SUCCUMBS

FRANK B. FOSTER

Conservationists throughout the U. S. and the sportsmen of Pennsylvania have lost a valuable friend and ally, and the Game Commission lost one of its most enthusiastic and lovable members by the untimely death of Frank B. Foster, of Phoenixville, on November 26. His loss will be keenly felt, not only in Pennsylvania, but throughout the entire country. A sportsman-philanthropist, he took great interest in the affairs of the American Wildlife Institute, the Philadelphia Academy of Natural Sciences, the National Association of Audubon Societies and similar organiations to which he contributed generously. While an ardent gunner who had hunted big game in various parts of the world, he never failed to recognize the value of wild creatures other than game birds and mammals.

Mr. Foster was also a hobbyist of great reknown, famed particularly for his prize-winning Percheron horses and Guernsey cattle, as well as his large commercial game farm. He was appointed to the Commission by Governor Earle on June 22, 1935, and served diligently and courageously until his death.

NEAR TRAGEDY

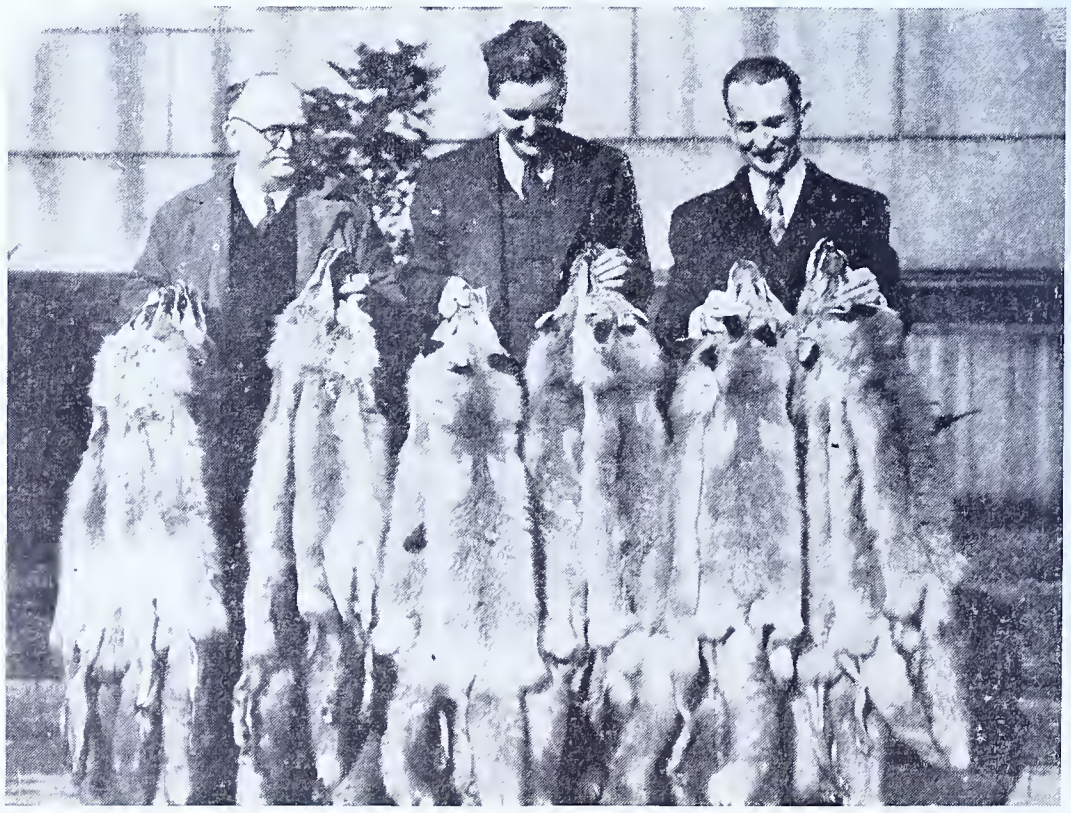
THERE is no animal as mean or as hard to figure out as a buck deer during the mating season, and keepers of zoos have been heard to remark on more than one occasion that they would sooner face a lion any time than an unruly buck. The animals are so cunning and deceitful at that time of the year that they must be approached with the utmost caution and timidity. You can't trust them for a moment. The attendant in charge of the Commission's experimental deer station in Lycoming County barely missed severe injury (or even death) on more than one occasion when caught off guard. One day he entered a pen without his usual protection, a heavy club, and the seemingly docile "Pete", an unusually large buck, struck with the speed of lightning the moment he sensed the attendant had no weapon.

A more recent example of the dangerousness of one of these animals during the rutting period was brought to light in Pike County where "Jimmy", the "tame" patriarch of the Mud Pond deer herd went beserk, attacked and almost killed Allan Van Pelt, 19, of Pinesville, Pa., in the woods near Minisink Lake, as Mud Pond is known. Only by the timely intervention of a hunting companion, Stanley Quinn, who shot the enraged beast through the head with his shotgun, was the unfortunate individual saved from a horrible death. As it was, he was badly gored.

The young hunter was taken to the offices of Dr. M. J. Leitner, at Bushkill, who testified that he had many deep scratches and abrasions and two deep puncture wounds, all of which he dressed.

In reviewing the accident later Mr. Van Pelt in an affidavit said "I was gunning in Pike County about 9 miles in from Bushkill, with my partner, Stanley Quinn. It was near quitting time and we were about 100 yards apart.

"I saw a deer down below me about fifty yards. Looking closer I saw it was a buck. I wanted to get a better look and maybe count the number of points, so I walked to within about 25 yards of the deer and stood still. The deer then began to walk slowly towards me. I thought the wind was just right and that he didn't see me. He walked up to within three yards of me, and before I could protect myself he made two jumps and raised me off the ground with his horns. When he hit me, my gun accidentally went off and shot into the air. My gun dropped from my hands and I grabbed his horns, drawing him to the ground as I fell over backwards. I lay holding the deer and began to yell to Stanley. I had the deer by the top of the horns and was pushing his face into the ground. The deer was on his front knees and did not have the power to raise himself up and I was able to hold him until Stanley came running up, put the gun to



Thirty red foxes taken by one Pennsylvania trapper and submitted to the Commission for bounty.

CURRENT TOPICS

his neck and fired, the deer falling off of me and dying in a few seconds. The other two partners had come to the scene by that time. They carried me about two hundred yards to the car and took me to Bushkill where I was treated by Dr. Leitner."

"These are my true facts regarding the buck deer killed Saturday, November 9, 1940, in Pike County."

This accident will no doubt bring about a change in the entire policy of the Commission regarding future permits to retain tame deer no matter how supposedly tame they might be. It so happens that "Jimmy" had been a pet of the Minisink Lake Club for about twelve years during which time he was in and around the wire enclosure at the club during hunting seasons. At other times he was permitted to roam the forests, often bringing back other deer to the enclosure. As a result of the near catastrophe the Commission, after taking into consideration the possibility of similar occurrences, cancelled the club's permit to enclose any animals on the property between November 15 and December 15, 1940.

As mute testimony of the fate which might have overtaken an innocent victim "Jimmy's" head will be mounted and hung in the offices of the Commission. Below it, properly enscribed, will be a plate citing briefly the circumstances surrounding the case.

LOST—in Fishing Creek Valley, November 11, one bitch fox hound, light brown color with white markings.

November 20—One bitch and one male fox hound, white with small black saddle, brown on head. If found kindly notify E. B. Mitchell, Beaufort Lodge, Linglestown Road, Harrisburg, Pa.

Out of the forests of Alaska comes the dramatic tale of a CCC boy stricken with appendicitis while 40 miles from civilization and his rescue at 2 o'clock in the morning by a Flying Warden of the Alaska Game Commission, the operating agency of the Fish and Wildlife Service, United States Department of the Interior.

Rock growth on deer horn taken in Northern Wisconsin by one Howard Davis, address unknown.

SENATOR KEY PITTMAN PASSES ON

The Honorable Key Pittman, Senior Senator from the State of Nevada passed away early in the morning of November 10th in a hospital at Reno. He had gone West five weeks earlier to conduct his campaign for reelection. In order to cover the state he did most of his traveling by automobile. Distances are great in Nevada and he exhausted his strength. Two days before the election he was taken to the hospital. Pneumonia set in, resulting in his death.

Senator Pittman held a unique place not only in the Senate but in the country at large. He was Chairman of the powerful Foreign Relations Committee and as such he took the leadership in legislation affecting neutrality and foreign aspects of our National Defense program. His world-wide knowledge gained through travel in both hemispheres and contacts with diplomats and common people of those nations gave him an incite which frequently lead him to make predictions of events before their actual happening in the foreign field.

Senator Pittman was also President pro tempore of the Senate. He was Chairman of the Special Committee on Conservation of Wildlife Resources and Chairman also of the Special Committee on Silver. In addition to the chairmanships he was also a member of the committees on Expenditures in the Executive Departments, Irrigation and Reclamation, Judiciary, Mines and Mining, Public Lands and Surveys and Territories and Insular Affairs.

Senator Pittman was deeply interested in conservation of wildlife. He gave leadership to the movement in the Senate and the nation. He brought to conservation in the Nation's Capital a practical knowledge of the out-of-doors and wildlife gained through many annual pilgrimages in the pursuit of fish, waterfowl and the larger game animals.

He was among the first to join the gold rush to Alaska. There were no laws in that rough and rugged territory and he was chosen by his fellow citizens of Nome to be the first prosecuting attorney of the Consent form of government. From Alaska he came to Nevada again in search of gold in that mining country. He was elected to the Senate in 1912 for an unexpired term of four years and was reelected in 1916 and each six years thereafter. In the recent election which produced a campaign of extreme bitterness he was elected by a very substantial majority.

SENATOR KEY PITTMAN

It was his great relaxation each year to take Mrs. Pittman on a hunting trip into the forest wildernesses of either Oregon, Nevada or California. On these trips he went by horseback and a pack animal, making camp each night under the stars of Heaven. These journeys into the solitude of our Western forests gave him recreation and refreshment and an intimate knowledge of the habits and needs of wildlife. They contributed largely to his leadership of the wildlife restoration movement in the Senate. He has frequently remarked that he cherished more his name attached to the Pittman-Robertson Act than any other piece of legislation which bore his name. His colleagues in the Senate followed his advice and counsel on wildlife proposals and no conservation legislation of any major importance during his term of office passed without his imprint upon it somewhere. He felt that our wildlife reservations have been inadequately financed both in their administration and patrol. At the time of his death he was giving serious consideration to the problem of how best to bring about legislation which would give to our sanctuaries and reservations the needed protection and administration to make them of maximum use.

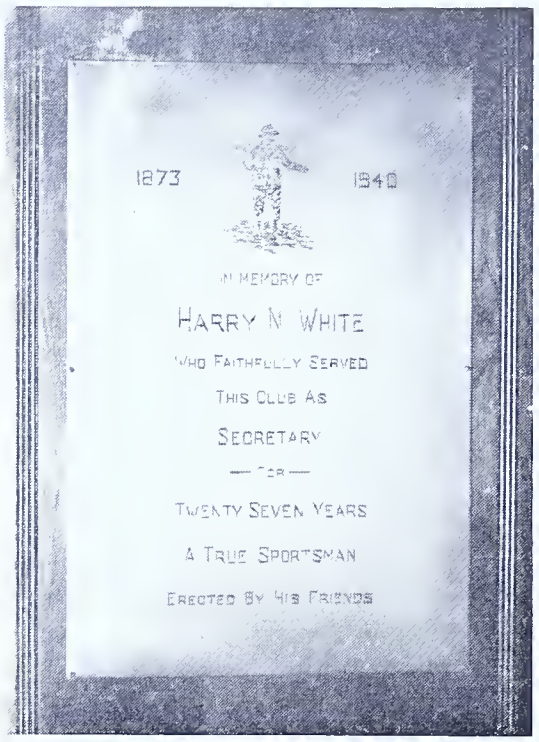
With the passing of Senator Pittman wildlife has lost a good friend and the conservation movement a great leader.

Senator Pittman was 68 years of age. He is survived by his wife Memosa and a brother Vail M. Pittman, a newspaper publisher at Ely, Nevada.

He was given a State funeral and the services were conducted by the Rector of the Episcopal Church of which he was a communicant.

—Wildlife Institute.

WITH THE CLUBS



Ninety-eight friends of the late Harry N. White, for 27 consecutive years the secretary of the Towanda Gun Club, met at the club house at Homets Ferry, Oct. 17, 1940 at 6:30 P. M. to pay tribute to a great sportsman and lovable character, and to dedicate a bronze plaque in memory of his faithful service in the interest of conservation.

To have known Harry was to love him. His unselfish attitude toward his friends and all mankind was a rare treasure. His friendship was the happiest any man could have. His calm and genial disposition drove away cares, anxieties and troubles and he was firm and strong in all trials of life—a shining example for others to follow. He gave unselfishly of his own time for the benefit of others. He placed service above self and brought joy and happiness to all who knew him. He never complained about his own troubles, but the troubles of others were his deep concern.

To say that his friends will miss him is not enough. His passing has taken something out of their lives that can never be replaced. There was only one Harry. His memory will always remain with those who knew him, and the examples he left behind for others to follow speak louder than any words that can be written or spoken.

Figures have just been released by the U. S. Treasury which show that the excise tax on sporting arms and ammunition for the fiscal year July 1, 1939 - June 30, 1940 are the greatest in the history of this tax. It reached an all time high of $3,707,803.68. This is a little over $731,000 more than last year when the tax paid by sportsmen amounted to $2,976,019.80. Since the Pittman-Robertson Act became effective on July 1, 1938 there has been paid into this fund up to June 30 of this year the sum of $6,683,883.48.

A REAL SPORTSMAN OBEYS ALL LAWS AND BAG LIMITS
HELP FEED THE GAME
LOOK BEFORE YOU SHOOT AVOID ACCIDENTS

Crow Foot Rod and Gun Club

of Wilkinsburg, Pennsylvania, Inc.

Meets Every Tuesday Evening 907 Hay Street

GREATER RESPECT FOR PROPERTY OF OTHERS
MEANS LESS POSTED LAND
TRAMP THAT MATCH FIRE DESTROYS WILDLIFE

SEWICKLEY CLUB ACTIVE

"Last year the Sewickley Conservation Club, Sewickley, consisting of 15 members between the ages of 16 and 25 put out, and I don't mean along the roads, the following amount of feed: 2,250 lbs. of scratch feed; 130 lbs. of suet; 80 bu. of corn; 10 bu. of apples; 2 bu. of wheat; 2 bu. of green stuffs; and 1 bale of hay.

"We built 150 permanent feeding stations, which are now in perfect shape. We also killed almost 500 pieces of vermin during the year. One hundred posters you sent us we placed in the store windows not only of our town but of four other towns in our district to make the residents "feeding minded". We are going to do the same thing this year."—Edward Quig, President, Sewickley Conservation Club, Sewickley, Penna.

GAME PROTECTORS AND SPORTSMEN MEET

Bethlehem Globe-Times Photo

In the group of game wardens, deputies, police, dog law enforcement men and others who met recently in Bethlehem and pictured above are Harvey D. Neff, Allentown; Paul A. B. Kelchner, Neffs; H. E. Klausfelder, Coopersburg; Willard Wichert, Allentown; Warren Yeakel, Allentown; F. A. Brown, Allentown; K. H. Rabenold, Allentown; W. C. Sandt, Hellertown; F. F. Schoener, Allentown; James S. Biery, Allentown; Harvey C. Keim, Emmaus; Roy H. Trexler, Macungie; Richard Hall, Northampton; William H. Stoever, Bethlehem; Robert S. Frable, Northampton; Morris A. Emelewski, Easton R. D.; Floyd B. Sterr, Easton R. D.; James F. Eckert, Danielsville; Elwood S. Rohrbach, Bethlehem R. D.; P. E. Zimmerman, Allentown; Clyde Pittinger, Mt. Bethel; Donald Sawyer, Bethlehem; Aaron J. Kirk, Bethlehem; James M. Heller, Bethlehem; R. E. Fleming, Bethlehem; John C. Nugent, Reading; Joseph D. Eisenbrown, Reading R. D.; James W. Clancy, Mt. Bethel; Lawrence L. Lehr, Bethlehem; B. A. Edelman, Robesonia; James C. Birk, Bethlehem; Charles Biddlecombe, Reading; Franklin G. Filman, Hamburg R. D.; Austin S. Strohl, Jr., Kutztown R. D.; Russell Sheldrie, Reading; E. R. Cromath, Fleetwood R. D.; Emmett Kreibel, Boyertown; Luther W. Benson, Birdsboro; Edward C. Hahn, Allentown; John D. Moll, Bernville; Alfred Reimer, Northampton R. D.; Frank Meyer, Bath; Marvin F. Kroman, Danielsville; Robert H. Ackerman, Allentown; "Bud" MacKenzie, Allentown; Barton M. Snyder, Allentown; Donald MacKenzie, Allentown; Marvin Roberts, Walnutport; Carlton Schleicher, Slatedale; Lewis Male, Nazareth R. D.; James Vosper, Pen Argyl; Herbert A. Diehl, Hamburg; H. L. Brunner, Coplay R. D.; Harry H. Rickert, Boyertown; K. A. Wilson, Reading; J. A. Leindecker, Wyomissing; W. A. Moyer, Allentown; M. D. Stewart, Easton; E. H. Wolf, Northampton; Raymond Ayers, Northampton.

WITH THE CLUBS

HELP SAVE OUR WILDLIFE

By Supporting the Third Annual

IZAAK WALTON LEAGUE OF AMERICA

Game and Feed Shelter

A Project in Cooperation with Schuylkill Council of the Boy Scouts of America

Each Boy Scout Troop is to build 10 Approved Game and Feed Shelters and feed Wildlife in shelters thru winter months until Wildlife can take care of itself in the Spring. For this achievement the

Schuylkill County Chapter of the Izaak Walton League of America wishes to raise $100.00 to give to the Schuylkill Council of the Boy Scouts of America for the good work in conservation which they do. Won't you do your part and help?

GRAND DRAWING

First Prize: Winchester Repeating Shotgun, Model 12, 12 guage. Retail value $42.50. Second Prize: Complete Fishing Outfit. Weber Initiator, actual retail value $26.10. Third Prize: Winchester Repeating Rifle with telescopic sights. Retail value $20.00.

Tickets: 10c each, 3 for 25c, $1.00 per book

By helping this Conservation Project you help everybody as well as yourself. Conservation needs you and you need Conservation. Kindly make returns to Dr. Walinchus, Secretary.

FRANK D. McCUE

Frank D. McCue, prominent Oil City sportsman and businessman for many years, died at his home on Nov. 13, at the age of 78. He helped father several sportsmen's associations, was a member of the old Fur, Fin and Feather Club and a charter member of the local chapter of the Izaak Walton League. He was president of the People's Building and Loan Association for the past 22 years and was closely associated with the fraternal, civic and social life of Oil City and Venango County.

MERCER COUNCIL PROGRESSES

The Mercer County Council of the Pennsylvania Federation of Sportsmen's Clubs campaigned to make the 1940 small game season one of the most enjoyabel and successful in history.

All roads leading into the county were posted with signs notifying hunters from other counties that they were welcome providing they 'lived up to the code of the sportsman." Officials of the 12 different clubs in the county pledged full support to game protectors in a campaign against violations of game laws.

Seth Myers, Secretary of the County Council said: "The clubs are more determined than ever to prove to the landowners that they are doing everythnig possible to put a stop to destruction of farmers' property by non-sportsmen hunters." Myers said the cards are to remind all hunters that "they must conduct themselves the same way they would expect a farmer to act if he were a guest in the hunter's home." He also said: "Sportsmen's clubs have succeeded to some extent in educating the thoughtless hunter that unless the landowner is given the consideration and respect he deserves, the time will come when all privately-owned land will be posted to protect the farmer's stock and property."

The signs are a flaming red and point out to the hunters that: "The farmer owns your playground—ask him for permission to hunt." This appeal also is made: "All hunters are urged to conduct themselves according to the code of sportsmen, and respect the landowners' rights at all times. Be considerate of wildlife. Make sure the game is legal before shooting. Report all violations of game laws or acts of vandalism to the first game protector you meet or phone Mercer No. 6. Get car or hunting license number of violators. If you would have more game—kill less."

FUR-BEARERS VALUABLE

Exactly 554,725 fur pelts valued at more than $1,900,000 were shipped from Alaska last year according to the annual report of the Alaska Game Commissioners. With the exception of 1932, when some 613,000 pelts left the Territory, this is the highest number of fur pelts shipped to the States during the past 15 years.

SIGNS URGE HUNTERS TO RESPECT PRIVILEGES

Photo by Sharon Herald

Mercer County sportsmen carried on a campaign to bring about a more pleasant relationship between hunters and farmers. Signs were posted on all roads leading to the county urging hunters from other counties to respect their priviliges. Sportsmen shown above tacking up the vrst sign are, left to right: H. S. Gates, Deputy Game Protector; Arch Fruth; Duane E. Lettie, County Game Protector; "Rosy" White, County Fish Warden, and Seth Myers, secretary of the Mercer County Sportsmen's Federation.

WITH THE CLUBS

Top: Millard Jones, Jones and Carr Kennels, with 1st all age fox hound. A Pennsylvania State Champion for 1940. Dr. F. S. Circhard, Montrose, Pa., with Irene Raider, Walker Fox Hound, 1st all age female. Best of opposite sex. Center: Miss Joan Baer, Hopewood, Pa., chosen 1939 Pa. Fox Hunter Queen. Bottom: Mr. A. G. Rolfe, Poolesville, Md., Pack of Tregg Fox Hounds. Dr. F. C. Birchard with his pack of Walker Fox Hounds.

STATE FOX HUNTERS MEET

Marked by a near-record attendance, fine weather and excellent hunting conditions, the annual bench show and field trials of the Pennsylvania State Fox Hunters Association, held at Fawn Grove, York County, was characterized as one of the most successful in the history of the association.

The trials were the first held in the eastern part of the state and evoked keen interest throughout the section. The Mason-Dixon Association of York County and Maryland sponsored the meet, which attracted many fox hunters from Washington, Greene, Fayette and Westmoreland Counties.

Results of the bench show follow:

Puppies Under 3 Months

First, third and fourth won by Gilmer S. Ramsburg, Whiteford, Md. Second won by Fred W. Baer, Hopwood.

3 to 7 Months, Male

1st—Swinger, by Fleet Wing and Isabel, Sherman Arnold, Darlington, Md.

2nd—Ringer, by Fleet Wing and Isabel, Sherman Arnold, Darlington, Md.

3rd—Sloniker B, by Buzzard Boy and Unknown, Milton Hankins, Pylesville, Md.

4th—Flying Buzzard, by Buzzard Boy and Jennie, Milton Hankins, Pylesville, Md.

3 to 7 Months, Female

1st—High Flyer, by Buzzard Boy and Jennie, Milton Hankins.

2nd—Buzz Arrow, by Buzzard Boy and Jennie, Gilmer R. Ramsburg.

3rd—Bessie, by Crown and Mollie, E. M. Gemmel, Red Lion.

4th—Nancy, by Avon Masterman and unknown, Thomas W. Martin, Perryopolis.

Puppies 7 to 12 Months

1st—Ben, by Cord Blair and Sun Dial Singing Queen, Center View Kennels, Stewartstown.

2nd—Ruby Jo-Jo, by Wildwood Jo-Jo and Fairmount Ruby, Clyde H. Geitz, Felton.

3rd—Belle, by Whitey Raider and Lady Brunswick, Centre View Kennels.

4th—Robert Crow, by Tommy Crow, Jr., and unknown, Centre View Kennels.

Derby Male—13 Entries

1st—Billy Raider, by Trouble's Raider and Dollie Herrin, Jones & Carr, Delta.

2nd—Cub Stride, by Dawson Stride and Masterman's True Love, Fred W. Baer.

3rd—Fleet Wing, by Buzzard Wing and Hattie Griffith, Milton Hankins.

4th—Filmore, by Pepper and Belle, Dr. Evans M. Free, Stewartstown.

5th—Pepper, by Pepper and Queen, Emanuel Grimm, Red Lion.

Derby Female—7 Entries

1st—Delilah Lee, by Ruff Gordon and Delilah Lee, Milton Hankins.

2nd—Tillie Wing, by Buzzard Wing and Midget Crow, Milton Hankins.

3rd—Belle Rhea, by Tom Rhea and Belle, Clarence Kilgore, Delta.

4th—Bess, by Happy Woodward and Bess, Milton Hankins.

5th—Flapper Heels, by Jimmie Stride and Flying Crook, Milton Hankins.

All-Age Male—13 Entries

1st—Drive, by Gordon and Mollie, Jones & Carr.

WITH THE CLUBS

2nd—Joe, by Gordon and Rachel, Milton Hankins.

3rd—Pilgrim Stride, by Avon Masterman and Peggy Stride, Fred W. Baer.

4th—Eneezy, by Gordon and Gypsy, Jones & Carr.

5th—Gilmore, by Crown and Jennie, Centre View Kennels.

All-Age Female—11 Entries

1st—Irene Raider, by Bill Raider and Bonnie Stride, Dr. F. S. Birchard, Montrose.

2nd—Lady, by Norwin of Concord and unknown, Centre View Kennels.

3rd—Calamity Jane, by Flash Gordon and Lady Alice, Fred W. Baer.

4th—Betty, by Tuff and Rose, M. W. Slonecker, Elkton, Md.

5th—Cricket, by Harris and Spot, H. Stanley Herrmann, Felton.

Best all-age hound—Drive, Jones & Carr.

Best hound in show—Drive, Jones & Carr.

Best opposite sex—Irene Raider, Dr. F. S. Birchard.

Best natural carriage hound—Drive, Jones & Carr.

Pairs—8 Entries

1st—Drive and Sneeze, Jones & Carr.

2nd—Belle and Lady, Centre View Kennels.

3rd—Ben and Gilmore, Centre View Kennels.

4th—Calamity Jane and Wild Bill Hickock, Fred Baer.

Results of the field trials follow:

Derby Field—40 Hounds

1st—High Heels, by Flying Heels and Nellie Wing, Centre View Kennels.

2nd—Tillie Wing, by Buzzard Wing and Midget Crow, Milton Hankins.

3rd—Susie, by Joe and Lucy, A. W. Arnold.

4th—Delilah Lee, by Ruff Gordon and Delilah Lee, Milton Hankins.

5th—Nero, by Joe and Lucy, A. W. Arnold.

6th—Whirl Wind, by Cap Kepner and Star Campbell, E. Guy Kepner, New Bloomfield.

7th—Tally-Ho, by Kilkoma H. and Dinah, Clarence Kilgore.

8th—Flapper Heels, by Jerry Stride and Flying Crook, Milton Hankins.

9th—Pepper, by Pepper and Queen, Emanuel Grimm.

10th—Happy Bess, by Happy Woodward and Bess, Milton Hankins.

H. G. A. bench and field—Tillie Wing.

All-Age Field—90 Hounds

1st—Amy, by Tom Coady and Speckle, M. W. Slonecker.

2nd—Spike, by Mike Harper and Maxey, A. G. Rolfe, Poolesville, Md.

3rd—Montrose Raider, by Ray Raider and Skeet, Dr. F. S. Birchard.

4th—Jiggs, by Socks of Charitan and Bessie, A. R. Wilcox.

5th—Tom, by Mike Kemper and Lindy, A. G. Rolfe.

6th—Lou, by Sport and Tena, Rex Cheek, Bel-Air, Md.

7th—Lady, by Norwin of Concord and unknown, Centre View Kennels.

8th—King, by Pat and Dixie, Emanuel Grimm.

9th—Allen Gordon, by Gordon and Joan, Manuel Crowl.

10th—Rock, by Pat and Dixie, Emanuel Grimm.

State Field Champion—Amy.

Annual Meeting I. W. L. A.

The next annual meeting of the Izaak Walton League of America will be held in Washington, D. C., March 27, 28 and 29, 1941, with headquarters at the Willard Hotel.

In going to Washington for its 1941 meeting, the League is breaking a long-time precedent in holding its national convention elsewhere than Chicago where its national headquarters is located.

Members of the League, their families and friends are cordially invited to attend the League's 1941 convention. Sightseeing trips for all, and special entertainment features for the women will be arranged by the Washington, D. C. chapter and its auxiliary.

Prominent features of the League's program which will be covered at the convention are:

1. Means for correcting nationwide pollution.

2. Means for correcting abuses of public rights in water occasioned by indiscriminate high dams which ignore biological functions of water and recreational values.

3. A forthright program for protection of remaining wilderness against any and all encroachments.

A special feature of the program will be a half-day visit to Patuxent wildlife research station at Beltsville, Maryland, where experts of the Fish and Wildlife Service will demonstrate latest scientific practices in wildlife investigation, which include studies on the interrelationships of wildlife with agriculture and forestry.

R. E. Wallace, President of the Susquehanna Sportsmen's Asso., Liverpool, Pa., with keystone emblem on jersey. Many clubs are adopting emblems of one sort or another to identify their members among farmers and other sportsmen.

Morning Call, Allentown

The arrangements for the recent field day conducted by the Federation of Sportsmen's Clubs in Lehigh County at the North End Rod and Gun Club were completed by Henry Klansfelter, Coopersburg R. 2, chairman of the event; Earl Cope, 173 Ridge St., Emmaus, Mo-skeet-o shoot; John H. Craig, 41 Dowell St., Slatington, general bursar; Franklin Jones, 1115 Lehigh St., Allentown, field captain, and Robert D. Dreisbach, amplification. Seated are Charles H. Nehf, secretary of the organization; Annabelle Keifer, Alburtis, and Grace Vogel, Palmerton R. D., distribution of novelty badges; and Forrest B. Kiefer, Alburtis, president of the federation.

THE BOSS WAS IN THE RED

★ THE EDITOR

I DO NOT believe I ever knew anyone so tenacious, so persistent, so determined to run down a trail, or to solve a mystery, than our own energetic Executive Director Seth Gordon. And I can speak with authority, because I have worked under and for him a great many years. When he gets his head set on getting something done you can bet your bottom dollar that he's going to get what he's after. I never liked to pan anyone, even though the joke's on the other fellow, but the story I am about to tell you gave me such a laugh that I feel like passing it on.

A short time before the small game season the subject of my none too ready wit got his head set on a hat, and a red one at that. He'd been looking through one of his wife's magazines, when a picture in full color struck him right between the eyes. It showed two hunters with dogs and guns and real bright red hats—fellows from the West Coast. "Gosh," he said to himself, "would I like to have one of those hats? That's just what we have been trying to get our Pennsylvania hunters to wear."

He sprung the idea on us at one of our regular Monday morning staff meetings during a discussion on safety in the field. He was pretty enthusiastic about the whole thing, and I could tell by the gleam in his eye and the way he handled his pipe that the "hound was on a good scent". At any rate, he got busy and wrote a friend of his out in Seattle, telling him about the photo and asking him if he knew where the red crushers were made, and how much they cost.

His friend did more than that. He sent him a hat as a gift, and at a subsequent staff meeting we not only admired it but all of us wanted one. When we learned that they only cost 98c each, plus 2c sales tax, in other words a "buck", and that the boss's friend had told him he knew of a sporting goods dealer in Seattle who would be glad to furnish all the hats he wanted, we dug down in our jeans and each kicked in with a dollar.

About that time the Chief figures maybe it would be a nice thing to present each one of the Commissioners with a red hat just before the hunting season. So he turned his pockets inside out, and after a little misunderstanding at the other end as to size and number, the long awaited head pieces arrived **air mail**—which of course cost the boss quite a little more money. But they got here in time, and we didn't worry because he didn't say anything to us about delivery charges, and naturally we didn't remind him about it. Not that we are in the least mercenary.

But the boss didn't care about that part of it. He was genuinely interested in having all of us set a good example for other hunters by wearing bright red sky pieces, and a few dollars more or less in the interest of such a cause was money well spent. Nonetheless, when he got to thinking it over later, especially with four or five surplus hats on his hands that he didn't order but paid for anyhow, he wondered "why in the heck didn't I think in the first place to ask that sporting goods dealer out in Seattle who manufactured them? After all, that fellow out there is only a dealer."

So what happens. He writes again, and lo and behold he's told that the hats were jobbed by a house in Portland, Oregon. Then he follows further, and learns they are wholesaled by the Pan American Hat Company in New York City. That tickled him, because he was hoping to find a store closer home where our hunters could buy the hats if they wanted them with little extra mailing cost.

Most of us get around the State a good bit, but we never saw anything like this particular kind of hat, and the boss figured many Pennsylvania hunters would like them and want to encourage the local sporting goods dealers to stock them.

Well, he wrote to the Pan American Hat Company, and they came back and listed a big bunch of subsidiary companies where their hats were made. But the end of the story, and the biggest joke on the boss after going to all the trouble and expense he did to promote a worthy cause, was that the plant which makes these particular hats is located at Adamstown, Pennsylvania, not forty miles southeast of his own office.

It was a long trail, but like I told you before, once the boss gets his head set on something, even though it's a hat, he'll go after it like a ferret after a mouse. But we're glad to know that the hats are made right here in Pennsylvania, where other top-notch red hunting clothing is made, and we feel sure if the fellows who are interested in getting a red felt crusher for next year will let their local merchants know their desires, they'll have no difficulty. I wore mine the few times I got out, but I spent more time answering questions of fellows who wanted to know where I got it than I did hunting.

Incidentally, Mr. Gordon just handed me a little note from the owner of the Sporting Goods Store in Seattle who furnished the red hats, and in it he said, "Here in Washington it has become almost an unwritten law for hunters, farmers, loggers and others to wear this type of hat during the hunting seasons, and this precaution has undoubtedly prevented many unfortunate and unnecessary accidents in the field."

When The Parson Goes Hunting

By FRANK R. DeHAAS

★

LAST summer our church was blessed with a new minister who has proved not only to be a good minister but an all around good fellow and sportsman as well. We soon learned that he was an ardent hunter but had never hunted big game, having come from Ohio. So we took him along hunting last fall.

Well, the first thing he proved was that he could take it, and but for his inexperience, was a good pupil and would have come through with flying colors if it had not been for one thing.

Near the end of the week we decided to hunt through the Kettle. Now, the Kettle is nothing more than a big swale about a mile across, this being Bill Ranck's favorite hunting place, and of course we could not pass it up. Accordingly, we made plans to hunt it, Chauncy taking four men around the left side and Mack taking four around the right side, including the parson. So the parson would not get lost we always put him in the middle of the drive or watch. We always drive silent so there was always a chance of his getting lost.

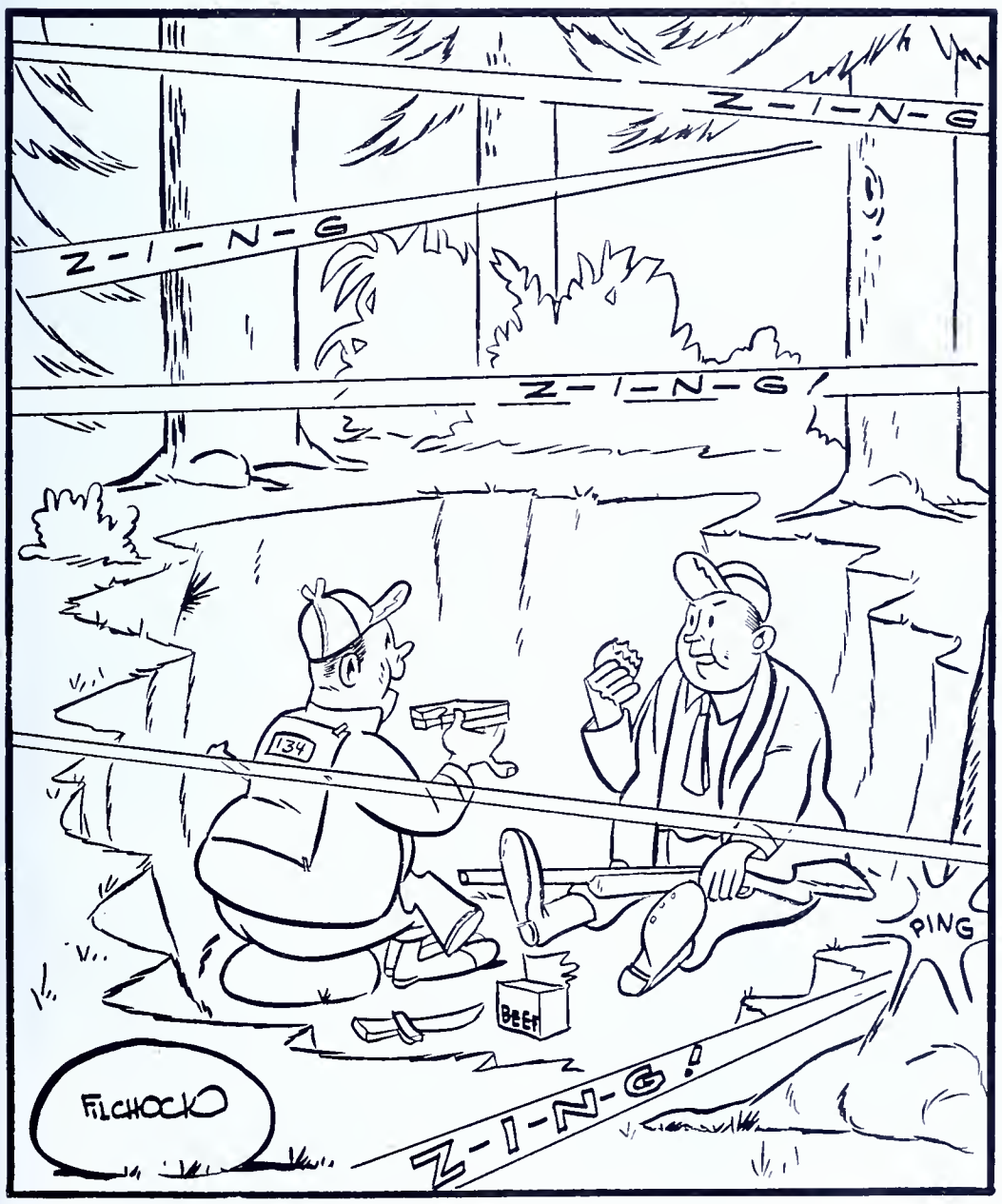
Here is a little tip. By yelling, blowing horns or bells you drive the deer clean over into the next county, or if they do come through they usually come on a dead run and your chance for a good shot is not so good. We use several good crow calls instead, and have worked out some good signals for steering the drive right or left, holding it up for alignment, and calling each other in. This does not disturb the deer which, if they do not wind or hear you, will remain where they are. Try it some time.

Well, to go along with my story, Mack took the boys to their proper stands. He put the parson on his stand with instructions to come down the Smith path when the drive was over as we were going to drive the left side of Bar Bottom down to Loyalsock Creek. We made the drive, but no soap. To add to our tough luck the boys all came in minus the parson. We waited about an hour then sent Chauncy back for him, half of us going out to go on watch. The rest of the story is what Chauncy told us.

He went back beyond where the parson was supposed to be, but no parson did he find; shrewdly he surmised that the parson had turned down Bar Bottom Path instead of continuing down the Smith Path, so he went in search of him. Seeing a camp fire on the other side of the run and a lone hunter hugging the same, he crossed over and inquired if Reverend McNeil had been there. He was informed that he had been there for about two hours and that he did not act like a parson either. He had told the hunter that we were going to hunt the Bar Bottom side and the hunter sent him down to the forks of the road telling him that is where we would come out and to wait there. So when Chauncy reached the forks there was the parson, cold and a little worried, but glad that we had found him.

He said, "Do you know what happened to me? Well, in crossing the run I fell in 'kerplunk' and got wet from head to foot, but seeing that young fellow having a fire I thought it best to dry my clothes at once to avoid a cold; so I stripped down to my B. V. D.'s, hung my clothes around the fire and dried them. That young fellow was accommondating. He built a big fire but did not speak once." "Say", said the parson, "was he one of those silent natives that you have been telling me about?" Chauncy, trying to hold back a grin said, "No, Parson, that was Mrs. Tom Reeden, the ranger's wife." "Oh, good grief," said the parson, his face reddening, "and I stripped clean to my underwear."

Well, the parson is a good fellow and a true sportsman, but the nearest he came to giving a bribe for silence is to keep me from telling the story.



"Certainly brings back memories, doesn't it, Charlie?"

HITTING THE JACK POT

Hunting on the opening day of the 1940 small game season, near his Twin Cedars Lodge, seven miles south of Ridgway, Wib Hugus, well-known local grouse hunter experienced the thrill of scoring a double on grouse over the first point made by his seven month old setter pup, Bonnie's Grethel.

In going in to flush the dog's find the handler was greeted by three birds taking to the air at the same time and successfully dropped one bird and then making a half turn picked off number two.

Grethel then pointed dead on finding both birds, even though it was the first time she had ever been shot over. This setter pup competed in her only field trial competition on October 5, 1940, at the Hochwalt Memorial Trials, Mt. Pleasant, Pa., and while only six months of age copped third place in the Puppy Stakes, so that she appears to have the necessary stuff to develop into a fine gun dog.

Report Your Game-Kill and also remind your friends to do so.

The Federal Aid-to-Wildlife Restoration Program

Continued from Page 7

This mining town passed out of existence with the acquisition of State Game Lands No. 174, Indiana County. The lands were acquired through the help of Federal Aid-in-Wildlife Restoration Funds.

of money the Federal Government and the State will pay on a 75%-25% basis. In Pennsylvania, all costs are paid from the Game Fund as they are incurred. Later the Commission submits what we customarily term reimbursement vouchers showing the exact cost of the project. After the accounts are audited, Federal Government checks to the extent of 75% of the expenditures made are received and deposited in the Game Fund.

In some instances, the project is completed before remuneration voucher is submitted to the Federal Government; in other instances such vouchers are submitted periodically to secure partial remuneration. Ultimately all the funds to which the State is entitled are obtained from the Federal Government.

Resume of Land Acquisition Projects Submitted by Pennsylvania

Three land acquisition projects were submitted and approved by the Federal Government, and a fourth is being reviewed by the Fish and Wildlife Service. The first two such projects and part of the third have been completed, for which the Federal Government reimbursed the Game Commission in the amount of $73,706.63. This sum represents 75% of the cost of acquiring 33 tracts of land comprising 20,107.4 acres. Pennsylvania's share of the cost was $24,568.87, so the total cost of acquiring 20,107.4 acres was $98,275.50.

The costs incurred were as follows:

Consideration paid to landowners	$81,631.50
Boundary line surveys	8,620.88
Title examining, abstracting, and conveyancing	8,023.12
	$98,275.50

Following are the Tracts Acquired to Date with the aid of Federal Aid in Wildlife Restoration Funds:

County	Grantor	Acreage	State Game Lands Number
Blair	Robert Norment	1,771.5	166 (new project)
Bradford	Mrs. Marion F. Lewis	722.3	172 (new project)
Butler	Butler County National Bank & Trust Company	346.2	164 (new project)
Centre	E. S. Bennett	801.4	103 (add to)
Crawford	Thos. B. Kennedy	242.3	101 (add to)
Crawford	Thos. B. Kennedy	377.9	101 (add to)
Crawford	Second Nat'l Bank of Erie	1,058.8	101 (add to)
Crawford	Milan A. Gray	469.7	122 (add to)
Cumberland	Guy B. Elliott	210.9	169 (new project)
Cumberland	John A. Swartz Est.	29.6	169 (new project)
Cumberland	S. E. Landis	94.3	169 (new project)
Cumberland	S. E. Landis, et al	164.1	169 (new project)
Cumberland	John S. Myers Estate	20.1	169 (new project)
Cumberland	Daniel Myers, Est.	183.0	169 (new project)
Erie	John Wonner	224.0	155 (new project)
Erie	Read Merry	43.6	167 (new project)
Erie	S. Riddell Lewis	234.6	161 (new project)
Erie	Federal Land Bank, Baltimore	185.3	162 (new project)
Erie	Federal Land Bank, Baltimore	183.1	163 (new project)
Erie	Security Peoples Bank	178.6	167 (new project)
Huntingdon	Shannon C. Weyant	1,079.5	121 (add to)
Huntingdon	R. D. Whitsel	619.5	99 (add to)
Huntingdon	R. D. Harper	414.5	99 (add to)
Indiana	F. E. George	783.1	153 (new project)
Indiana	Farmers & Miners Trust Co.	2,596.8	174 (new project)
Lancaster	Stewart Eckhart	1,986.4	156 (new project)
Luzerne	Luzerne Ochre Mfg. Co.	1,521.2	119 (add to)
Northampton	Louvina Rauch Estate	841.0	168 (new project)
Northumberland	Whitmer Steel Co.	1,104.8	165 (new project)
Perry-Cumberland	Henry B. McCormick	839.3	170 (new project)
Venango	Alfred M. Smith	46.9	96 (add to)
Venango	Harriett H. Stewart	107.6	96 (add to)
Warren	George Seavy	625.5	143 (add to)
		20,107.4	

The uncompleted portion of the third land acquisition project provides for the purchase of eight tracts totalling 7,187.6 acres, located in Luzerne, Sullivan, Venango and Indiana Counties.

The fourth land acquisition project, now pending approval of the Fish and Wildlife Service, provides for the purchase of 21 tracts, distributed through nine counties of the State. The tracts total 16,050.2 acres, for which the agreed price is $81,010.90. Boundary line surveys and title vesting are expected to cost about $20,865.26, making the total estimated cost of the project $101,876.16. On the basis of estimates, the State's share will be $25,469.04 and the Federal Government's share $76,407.12.

Research Projects

To date the Commission has inaugurated five research projects in the Federal Aid in Wildlife Restoration Program. Each has been set up on a five year basis and deals with a major problem currently faced by the Commission.

1. The first of these projects, entitled "An Economic Survey and General Inventory of Native Pennsylvania Fur-Bearers," was inaugurated in August 1938. Now starting its third year, the studies have brought to light a great amount of helpful data concerning the economics of Pennsylvania fur-bearers and their relative abundance.

2. In October 1939, a controlled deer breeding experiment was initiated at the Loyalsock Experiment Station at Montoursville, Lycoming County. This is designed to determine the reproductive rate of the species as well as the effects of varied food conditions upon the sex ratio of the progeny.

3. The third study is a combined field and laboratory project of an ecological nature. Its purpose is to discover the exact food and cover requirements of the more important small game species, and to develop techniques to be used in a general food and cover development program designed to benefit those species.

4. During the fall of 1939, a second fur-bearing animal study was inaugurated in northwestern Pennsylvania. The project is concerned chiefly with the life history and ecology of the muskrat, with particular reference to its effect on duck foods in the Pymatuning Waterfowl Refuge. It also deals with the food habits of skunks and foxes, particularly during the breeding season.

5. A project started in the spring of 1940 calls for a study of forest-wildlife problems, from which it is hoped that information will be gathered that will assist in more effective management of the Game Commission's 650,000 acres of State Game Lands. The project calls for a series of cutting operations over a five-year period on State Game Lands for the purpose of determining methods of correlating game management and timber production. Information gathered in connection with this phase of the project will likewise be of value to the Department of Forests and Waters in the handling of its one and one-half million acres of State Forest lands.

Another very important phase of the fifth project includes a study of the effects of forest fires on plant succession, soil fertility, plant growth, fruiting, and general ecological relationships. The ultimate purpose of this study would be to learn enough about the effect of fire intelligently to make use of it, if our studies disclose the fact that it is helpful in maintaining good wildlife habitats. The project likewise contemplates a study of methods of conducting controlled burning in the event its use is deemed wise or advisable.

The effects of various types of cuttings, however, will be the principal object of the project. Timber stand improvement work has become a very important phase of the forester's job. The

value of these cuttings in tree growth, and in increased seed production, has been proven many times. It is hoped that by means of definite study plots, and obseravtions over a five-year period, some definite culture methods can be suggested whereby timber management may be more closely correlated with wildlife management, providing widespread benefits to both the forester and wildlife manager.

For research projects the Federal Government has reimbursed the Game Commission in the amount of $10,815.01 as its 75% of the cost. The State's 25% contribution was $3,605.00. As previously stated, payments are made periodically by the Federal Government as the work on these projects progress. A total of $18,502.50 of Federal Aid in Wildlife Restoration funds are still available in approved research projects.

The Pymatuning - A Paradise for Nature Lovers

Continued from Page 5

raised. These left during the fall migrations. The pinioned birds have helped considerably in attracting migrating birds by acting as decoys. There have been as many as 3,000 Canada geese on the refuge at one time during migrations. There were 680 counted at one time in one raft. The largest concentration of geese at the refuge is found during the spring migrations.

During one summer twenty bald eagles were observed on one day and a few days later 57 American egrets were counted on their roosts. During the late summer months between 15,000 and 20,000 waterfowl can be observed on the area, most of which are raised in the refuge. Thousands of ducks and geese stop over during their migrations to feed and rest. As many as 70,000 wild waterfowl have been present on a single day during the migration season. A total of several hundred thousand migratory waterfowl visit the area during the migrations each year. In addition to the wild waterfowl and shore birds there are also a number of ringneck pheasants, quail and ruffed grouse in the fields and woods along the shore in the refuge area. It has been possible to trap a large number of rabbits and ringneck pheasants from the refuge area during the past few years for restocking purposes in other sections. Thousands of song birds that make their homes in the Pymatuning area add charm to the region with their many colors and songs. Undoubtedly as continued improvement is made, the value of the area for wildlife will be greatly increased and it will attract added thousands of interesting species each year.

It was evident that relatively few people would have an opportunity of seeing but a small number of the resident and nesting species because of the large area and the many secluded spots where they often congregate. Only a small number of persons likewise would have a chance to visit the area to view the many varieties which merely stop to rest and seek food during migrations. The Commission therefore began to devise means whereby all of those who visit the area could have an opportunity of observing at close range the many different and beautiful species of migratory waterfowl and shore birds. A Committee of the Commission, consisting of Commissioner Leffler and the writer, was appointed to work out a plan whereby all those who visit the section might have the privilege of learning to know all species, as well as plans for further development of the area. The results of a careful study was the construction of a museum for the purpose of displaying mounted specimens of the many species which use the refuge as a home or as a resting place. The building, which is 88'x22' with an exhibit room 50'x22', was completed in the fall of 1938. The museum now contains 53 mounted migratory and shore birds species, with a total of 232 specimens, all of which were collected on the area, and including the rare great white heron. The specimens are expertly mounted and are attractively displayed in glass cases. The collection is not yet complete and new ones are to be added from time to time as they can be secured. The museum has proven valuable to sportsmen, naturalists, and the general public. It is open to the public from May 1 to November 30 and has steadily grown in popularity. An estimate of the number of visitors is kept day by day and during the past summer from May 1 up to the present time upwards of 125,000 persons visited the museum for study purposes, or to merely look at the specimens. More than fifty school and college groups visit the area each summer as a part of their course of studies. Interested sportsmen have an opportunity to gain first-hand knowledge of many of our most beautiful migratory waterfowl, including some rarely seen in this region.

The museum is located on what is known as Ford Island, a peninsula of 103.3 acres extending into the upper reservoir about one mile south of Linesville. A parking area for approximately 200 cars has been completed and from this gravel walks lead to the museum and to other points of interest on the "Island". Considerable landscaping was necessary for the reason that part of the area surrounding the museum contained large pits from which gravel was taken for roads at the lower dam. These pits had to be leveled and plantings made. The nature of the soil made this job particularly difficut, but the plantings have become well established and add much to the attractiveness of the area. Shrubs and vines which furnish wildlife with food and cover were used for the most part in the landscape plantings between the parking area and the museum. These plantings serve as a source of food supply to the host of song birds as well as other forms of wildlife.

At the spillway of the upper dam and located near the museum is the now famous site where the "ducks walk on the fish", referred to by Ripley in his "Believe it or not." Fish are especially abundant in the refuge area and catfish have become so tame they will eat bread from the fingers of persons along the waters' edge near the spillway. Fish life in the refuge has been helped materially by reason of the planting of aquatics. Their abundance is shown by an instance of August 17, 1940 when Land Management Protector Burt Oudette discovered a place where a section of swamp had dried up leaving only a hole 12 feet wide and 30 feet long filled with water. The fish that had inhabited this section of swamp all collected in the one hole and 41,000 catfish were taken out by the Game Protector and the Fish Warden for placing in another location. In addition to the catfish several young muskellunge were also removed from the swamp hole.

Fishing, of course, is prohibited within the part set aside as a refuge for migratory wild waterfowl. The Game Commission and the Board of Fish Commissioners realized that it would be detrimental if the fish life in this area were permitted to increase indefinitely.

(Continued on Page 32)

Planting aquatic foods for waterfowl.

SPORTSMEN'S QUERIES

By CHAS. F. STAMBAUGH

ONE DEER TO A HUNTER

Q. If a hunter kills a deer, takes it home, and buys another license, is he allowed another deer? If a party of deer hunters go out, is it legal for each member to keep hunting until the party limit is killed?

W.J.,Jr.—Sugar Notch, Pa.

A. No individual hunter may kill more than one legal deer a season, regardless of how many licenses he purchases. The hunter who attempts to kill a second deer subjects himself to a penalty of $100.00. One who has been successful in killing a deer while hunting with a party, may continue to cooperate with his group, but only in the manner known as "driving". It is best that he refrain from carrying a shotgun or rifle under these conditions.

* * *

DRIVING DEER WHEN UNLICENSED

Q. May a person help drive deer without a hunter's license?

A.B.—Charleroi, Pa.

A. No. It is strictly contrary to law to drive deer with a hunting party unless you are in possession of a proper hunter's license.

* * *

THE CAMP COOK AND HIS DEER

Q. A man is hired by a gun club as cook during deer season. He holds a hunting license, is not on the roster and does not hunt with club. The club kills its limit of six deer. Is he allowed to make a kill of his own?

R.S.P.—Lancaster, Pa.

A. No, he is not. The cook at a private deer camp, who is also a hunter, should enter his name on the camp roster, and if he kills a deer, it must be counted with the six to which the camp members for whom he is cooking at the time, are entitled. The fact that he may hunt as an individual and not with the group does not change the situation. He is a member of the party and his kill must be included in the camp limit.

* * *

AUTO-LOADING RIFLE IS UNLAWFUL

Q. I have a Model 81, Caliber 35, Remington Auto-Loading Rifle, which has been classified as a semi-automatic, thus eliminating it from the automatic class. May I use this gun to hunt in Pennsylvania?

E.J.M.—Paterson, N. J.

A. No, this gun may not be used for hunting any wild birds or animals, as it is an illegal device. Any auto-loading rifle is, in our opinion, an automatic, and our Game Law forbids the use of firearms of that type. If you desire to use a repeating rifle, it will be necessary to use one which reloads solely by hand action and not automatically.

SHOOTING WILD TURKEYS WITH RIFLE

Q. Is it lawful to shoot wild turkeys with a rifle?

C.A.M.—Summit Station, Pa.

A. Yes, if the rifle is not an automatic. An air rifle may not be used on any wild birds or animals in this State, but you no doubt refer to a firearm.

* * *

PISTOL FOR SMALL GAME SHOOTING

Q. Is it legal to kill small game with a 22-Cal. pistol? I refer to rabbits and squirrels.

W. P.—Curtisville, Pa.

A. Yes, if the "pistol" is not an automatic. A revolver may be used for small game shooting, but not an automatic pistol, which also is forbidden for big game hunting.

* * *

NIGHT HUNTING FOR SKUNKS AND 'POSSUMS

Q. Is it lawful to hunt 'possums and skunks after sunset with a dog?

J.L.P.—Pottstown, Pa.

A. Yes, except from April 1st to August 20th, the closed season for dog training. The law also permits the use of artificial lights such as are ordinarily carried in the hand or on the person for hunting the above mentioned animals. One should at all times endeavor to avoid situations wherein he might be suspected of hunting game during the night time, as the hunting of any game, except raccoons in season, is unlawful at night. Opossums and skunks are unprotected in Pennsylvania until midnight, September 30, 1941.

* * *

KEEPING GAME AFTER SEASON RESTRICTED

Q. Kindly let me have full details on the permit issued by your office to possess game meat after season. This information will be transmitted to low-income families so that the expected large deer kill can be utilized to as full benefit as possible where needed. I take it, preservation in any form, cold storage, drying, canning, etc., is legal.

J.J.B.—Pottsville, Pa.

A. Unfortunately you seem to have obtained an erroneous impression of the present provisions of law in this respect. Deer, as well as other game killed in season, may not be possessed longer than sixty days after the close of the season on that species of game. The law giving the Game Commission the right to issue extension permits for possessing the flesh of game for a longer period was repealed in 1939, and permits are no longer available to possess venison or other portions of game for more than sixty days. It will therefore be necessary to dispose of the venison of all deer killed during the 1940 season, before February 13, 1941.

* * *

SCATTERING CORN FOR WILD TURKEYS

Q. Is it permissible to scatter corn during the open season for wild turkeys, for the evident purpose of keeping them in one place?

A.G.M.—West Chester, Pa.

A. It is unlawful to lay or prepare for use any bait, such as vorn or other grain, for the purpose of luring wild game and killing it. While there is no objection to feeding wild game corn at the proper season of the year, it would be a violation of the law to scatter ocrn for the purpose of attracting wild turkeys or other game birds and killing them. We therefore advise against a practice of this kind during the open hunting season or just prior thereto.

* * *

HUNTING RIGHTS OF U. S. ARMY MAN

Q. Please advise how an enlisted man in the U. S. Army can obtain a resident hunter's license in Pennsylvania?

R.H.M.—Bradford, Pa.

A. If he is a citizen of the United States regularly enrolled in the Army of this Country and officially stationed in Pennsylvania thirty or more days, he is entitled to take out a resident hunter's license. However, if he is not stationed in Pennsylvania and claims residence here, it will be necessary to show that he enlisted as a resident of this State and has a legal claim to Pennsylvania as his home while in the Army. Possibly a written statement from the local assessor of the district in which he claims residence, certifying that he is a resident of that community, will be sufficient to entitle him to resident hunting privileges, even though he may be stationed outside the State.

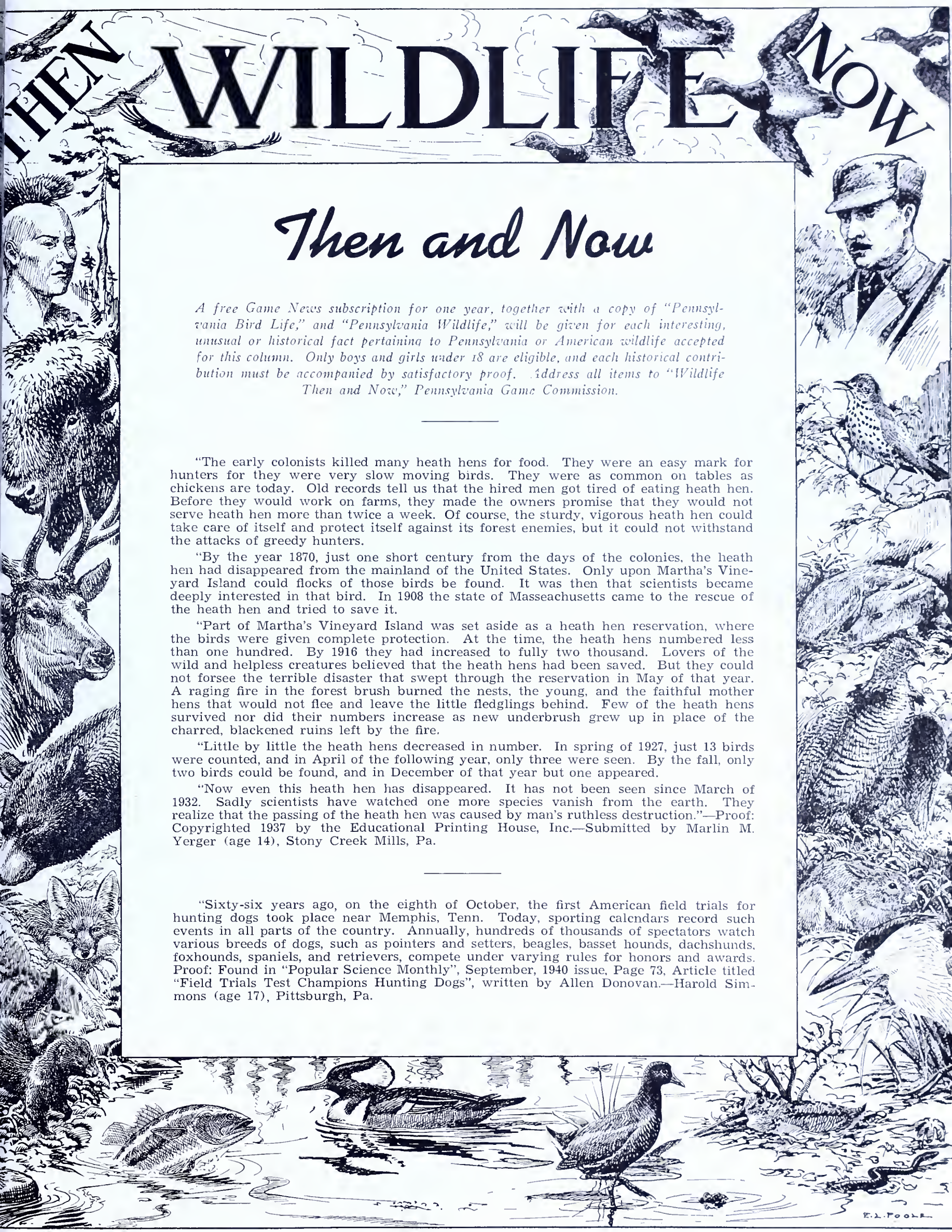
* * *

VENISON SHIPPED OUT OF STATE UNLAWFUL

Q. What is the procedure for a resident of Pennsylvania to ship venison out of the State?

L.E.F.—W. Englewood, N. J.

A. Cannot be done. It is unlawful to ship venison out of the State when taken from deer killed in Pennsylvania by a resident hunter. The Game Commission does not issue permits for shipments of that nature, and all game killed in this State by residents must be consumed within the Commonwealth.



Then and Now

A free Game News subscription for one year, together with a copy of "Pennsylvania Bird Life," and "Pennsylvania Wildlife," will be given for each interesting, unusual or historical fact pertaining to Pennsylvania or American wildlife accepted for this column. Only boys and girls under 18 are eligible, and each historical contribution must be accompanied by satisfactory proof. Address all items to "Wildlife Then and Now," Pennsylvania Game Commission.

"The early colonists killed many heath hens for food. They were an easy mark for hunters for they were very slow moving birds. They were as common on tables as chickens are today. Old records tell us that the hired men got tired of eating heath hen. Before they would work on farms, they made the owners promise that they would not serve heath hen more than twice a week. Of course, the sturdy, vigorous heath hen could take care of itself and protect itself against its forest enemies, but it could not withstand the attacks of greedy hunters.

"By the year 1870, just one short century from the days of the colonies, the heath hen had disappeared from the mainland of the United States. Only upon Martha's Vineyard Island could flocks of those birds be found. It was then that scientists became deeply interested in that bird. In 1908 the state of Masseachusetts came to the rescue of the heath hen and tried to save it.

"Part of Martha's Vineyard Island was set aside as a heath hen reservation, where the birds were given complete protection. At the time, the heath hens numbered less than one hundred. By 1916 they had increased to fully two thousand. Lovers of the wild and helpless creatures believed that the heath hens had been saved. But they could not forsee the terrible disaster that swept through the reservation in May of that year. A raging fire in the forest brush burned the nests, the young, and the faithful mother hens that would not flee and leave the little fledglings behind. Few of the heath hens survived nor did their numbers increase as new underbrush grew up in place of the charred, blackened ruins left by the fire.

"Little by little the heath hens decreased in number. In spring of 1927, just 13 birds were counted, and in April of the following year, only three were seen. By the fall, only two birds could be found, and in December of that year but one appeared.

"Now even this heath hen has disappeared. It has not been seen since March of 1932. Sadly scientists have watched one more species vanish from the earth. They realize that the passing of the heath hen was caused by man's ruthless destruction."—Proof: Copyrighted 1937 by the Educational Printing House, Inc.—Submitted by Marlin M. Yerger (age 14), Stony Creek Mills, Pa.

"Sixty-six years ago, on the eighth of October, the first American field trials for hunting dogs took place near Memphis, Tenn. Today, sporting calendars record such events in all parts of the country. Annually, hundreds of thousands of spectators watch various breeds of dogs, such as pointers and setters, beagles, basset hounds, dachshunds, foxhounds, spaniels, and retrievers, compete under varying rules for honors and awards. Proof: Found in "Popular Science Monthly", September, 1940 issue, Page 73, Article titled "Field Trials Test Champions Hunting Dogs", written by Allen Donovan.—Harold Simmons (age 17), Pittsburgh, Pa.

WITH THE CLUBS

REGRETTABLE

By RICHARD DURLING
Sports Editor, Somerset Daily American

Shortly after midnight November 14, Somerset County residents were awakened by what they described as a sound resembling "a dog dying from being struck by an automobile," but later discovered this to be a visit of whistling swans, migrating from the north.

When the birds flew into Somerset County, it is thought that they followed the Casselman and Youghighney rivers into southern portions of the county.

At the time their visit was discovered shortly after midnight, night-owlers swore that "geese" were flying over town and they held this firm conviction until later in the day.

South of town on the new Pennsylvania turnpike, where bright lights shone upon concrete, which was covered with the heavy rain of the night, the birds flew to the road and were reported to have died there.

During the early morning the honking of the birds was very noisy. Residents of Somerset, nearby Berlin, Meyersdale, Confluence and Windber reported that they did not get very much sleep during the night.

Dawn finally broke and county nimrods who knew not of the penalties that would be imposed upon them by federal and state governments set to the streams for the kill. They were under the impression that the birds were not swans, but geese.

Earlier, various town and cities in the county were filled with hundreds of the animals and this made transportation difficult.

At the Somerset city postoffice on North Center Avenue, a Somerset resident reported that he found it necessary to dodge in order not to be hit by the swans.

By mid-morning at least a score of streams in the county had been invaded by the birds. These included the Macdonaldton coal company dam, located one mile east of Berlin, the Baltimore and Ohio railroad dam, near Garrett, and the Quemahoning dam, in the northern portion of the county.

Somerset County hunters, who expected to get a kill of geese for the first time since 1924, when a large number were reported near Meyersdale in the southern portion of the county, awoke from their slumbers and set out to nearby water places. The sound of shots was heard throughout the day, mostly at the Macdonalton dam.

When reports of the kill straggled into Somerset, District Game Protector John S. Shuler, of 354 West Garrett street, and his staff of assistant protectors visited the places where the swans were reported to be killed.

Upon arriving there, Mr. Shuler discovered that hunters were ignorant of the fact that the white swan could not be killed and were protected by federal and state laws.

By this time, many who thought they were geese had already bagged their kill and had taken them home. Althogether there were hundreds of nimrods out and it would be impossible to estimate just how many birds they killed.

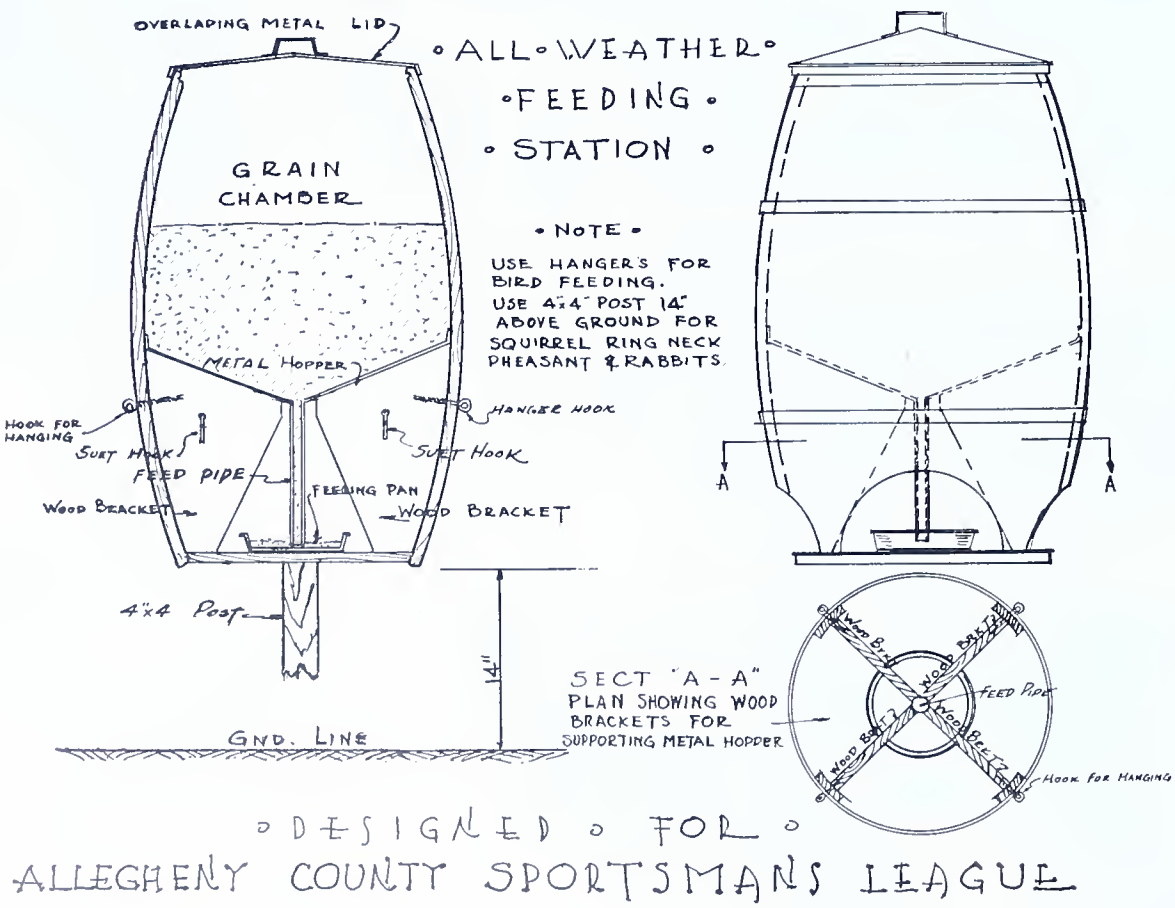
Mr. Shuler received answers from everyone he questioned. They told him of their bag and of their ignorance. He stated then that a complete investiagtion would be made of the entire affair. This is the duty of his office.

Others abandoned the birds, which were left floating in the middle of streams. This was particularly true at the Macdonaldton dam.

Hunters were careless in many respects and it is reported that there may have been 50 birds left floating in different water regions throughout the county as the result of their "spree" during the day.

Reports straggling in from different portions of the county were to the effect that

Game feeding barrels placed in the Moshannon Forest, Centre County, by the Sunrise Hunt Club of Pittsburgh. These feeders hold about two bushels of grain and have a separate compartment for grit and suet. They consist of a shee iron hopper which feeds into a funnel and releases about a cupful of grain at a time. These barrels are molted down to a stump about a foot from the ground. There are three outlets cut in the bottom ofthees barrels, to enable any birds or small game animal to escape from predators. The men in the photo are all members of the Allegheny County Sportsmen's League. Left to right: Jim Ekl, Northside Sportsmen's Association, Inc.; Bill Locher, Mt. Washington Association; Bill Reichley, Dormont-Mt. Lebanon Association; and Mr. Jackson of the same club. Peter Krass, Carnegie, Allegheny Co. League organizer was the instigator of this idea.



A BOBTAIL POINTER IN BIRD COUNTRY

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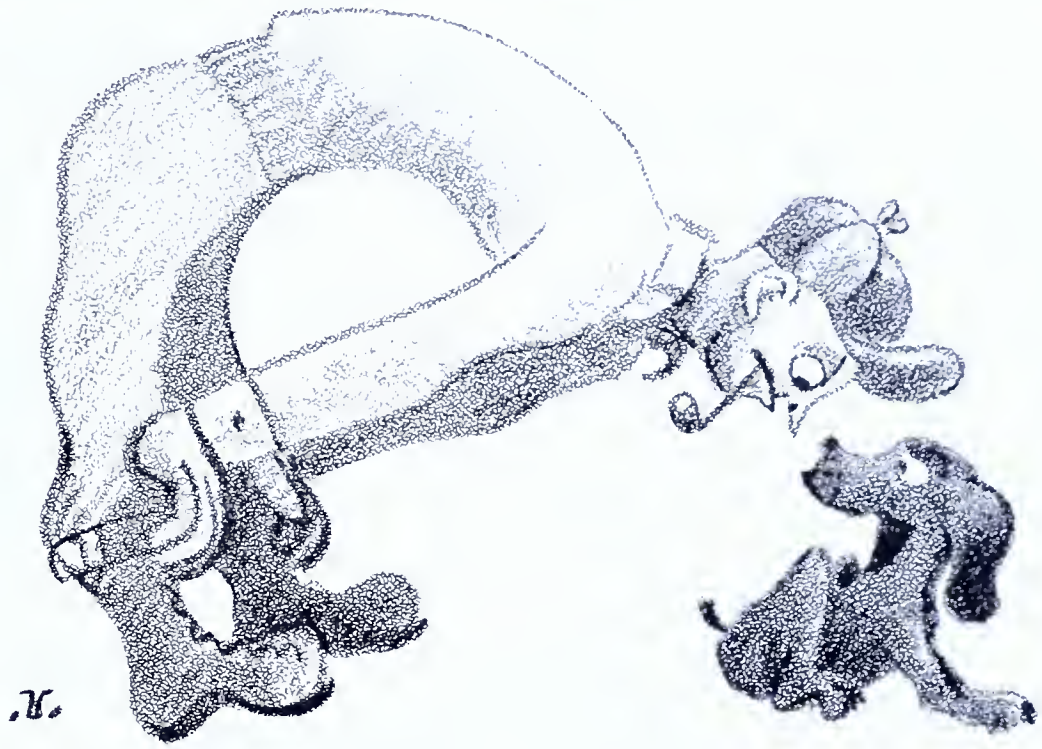

"All during the winter and next spring I worked with that black bobtailed pointer," Asa went on more clearly now, "he got so he could sense birds. He would plough through a field quick if there was no birds but he took his good old time if he sensed game. Pretty soon he got to show style and the way that boy pointed would make your heart stand still.

"And he had another good point," Asa continued, "he handled quail like they was a ball of cotton. If they had just come out of the shell he couldn't have been more careful. Not a feather out of place."

Sam kicked a pebble off the step.

"Sure made a hit with the judges," he agreed.

"It won him the field trial," Asa replied, "but that came next. I figured he was about set for a showing, so I entered him. Of course, the judges didn't know he was minus a tail and when they saw him, they darn near disqualified him. But he was pointer, they could see that, so they let him run. Well, you all saw the trials, so I don't need to tell you. He finalled with a lemon and white setter but it wasn't no contest. He really won when he found that covey over the rise and in ground that the setter had covered. I figured that broke the setter's spirit. At any rate, from then on he kept backing up Bob's points."

"He sure looked funny in the pictures," Sam said, remembering the magazine cuts and the papers. "I never saw a pointer without a tail before and I guess not many other people have either, but I give the judges credit, they never backed down."

"Yes, we went home tired but happy that night," Asa said.

"'Twas a good meet," Jim agreed, "but what's all that got to do with you sending the dog somewhere?"

Asa sat back thoughtfully and his eyes took on that far away look.

"'Taint necessary," he replied, "but I aim to do it. It's no more than right," he continued more to himself than the others.

"You see" he explained, "after the trials I got a note saying those two gentlemen was coming down for some hunting. The note came the day after the trials so I knew they hadn't seen nor heard about the winner yet; in fact when they got here they didn't know who won. Well, I didn't tell them but just did my job and took them out. Being right proud of Bob, I took him along.

"These two men has got some right smart dogs and the two they brought with them was above the average. Regardless, Bob ran rings around them. It was funny to watch 'cause in a little while I knew that they knew he was the pup they had dropped off here. No one could forget the bobtail."

"Did they say anything about him," Sam wanted to know.

"Not a word until the night before they was leaving," Asa replied. "We sat around that night talking about dogs generally when one of them up and says, 'That's the pup we left here two years ago, isn't it?" And I nodded my head.

"He sort of sucked on his pipe awhile and then he turned to his friend and said, 'George I think you were wrong.'

"They argued back and forth, gentlemen like, but I didn't know what it was coming to. After listening a bit it dawned on me that the she pointer was in the picture. She belonged to one of them, and they was neighbors. Both kept a kennel of pointers.

"It seems that one night the she pointer got out and then later had this bobtailed puppy. They neither one had ever seen a short tailed pointer, so they figured the best thing to do was to find the puppy a home and forget it."

"So you got him," Sam asked.

"That's it," Asa replied, "but now sitting there and remembering how Bob had worked they were pretty sure it was not all a mistake."

"You see one of them had pointers from that Surrey line and if you remember pictures of Surrey Dan, you know he was all black with a long white tail."

Sam nodded in agreement.

"Well they figured it was the Surrey line what produced Bob and, of course, that meant that the one who owned the she pointer really didn't own the pup but the other one did and they had given him to me."

Asa straightened up and reached in his pocket for tobacco. The story ended but not to the satisfaction of all parties. Sam tipped his hat back and let out a loud sigh.

"Now then, that don't explain the tail," he said with a frown.

"Ain't no accounting for it," Asa replied. "Just a freak of nature I suppose. But that dog Bob don't get no sore tail beatin' through brush and he sure don't need his tail for balance."

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the swans were sticking to the places where they had landed and possibly would not leave until there was a let-up in the weather.

By evening, when a light snow began to fall, streams all over the county were dotted with the birds.

During the day, Rollin Heffelfinger, of Irwin, field division supervisor of Division "G" came to the county to investigate the kill, and many penalties will be collected.

(Editor's Note: Numerous arguments among the hunters as to whether the birds were legal prey or not, should have caused all of them to hold their fire until they could identify the birds.

Conservation and Scouting

(Continued from Page 13)

them comes the timber that is used in making our battleships, airplanes, arms, and even our ammunition. Without this country's fine forests, our National Defense Program would be at a standstill. Without our forests our social as well as our political life would surely be at a standstill. It is our duty as loyal and true Americans to do all in our power to protect our forests, to conserve our national resources, to build and keep America what it has and will always be—the greatest country in the world.

The Virginia Commission of Game and Inland Fisheries plans to conduct a State-wide survey of the wildlife resources of that state. For the first year attention will be focused on obtaining information on quail, deer, turkeys, and fur animals so these species may be increased.

The Illinois Fish and Game Department plans for a Federal Aid in Wildlife Restoration Project to improve the wildlife habitat in the prairie regions of the State. It also plans to use a portion of its funds for a survey of the wildlife resources of the State.

THE PYMATUNING

(Continued from Page 27)

They, naturally, would increase in such numbers that disease might wipe out large numbers of them and thereby prove a distinct loss to the many fishermen of the State.

The Board of Fish Commissioners carried on a scientific study of the fish life within the refuge, and it was decided that a large number of the young fish should be trapped from this area. Moreover, the study disclosed that there would be enough available for other bodies of water after the stocking of the main dam was completed. The surplus, after stocking the lower dam, would be used for replenishing the supply in other bodies of water in the northwestern part of the State.

The Board of Fish Commissioners, after making the study, immediately made an agreement with the Game Commission providing for the development by the Fish Commission of a series of ponds, in one part of the refuge area, by building dikes. The plan also provides for a hatch house, and in addition there are included bank and control units consisting of about three acres in which the larger brood fishes will be placed, and from which eggs will be collected for further hatching. Much of the work will be accomplished through a WPA project which has been approved. The plans of transferring or restocking contemplated by the Fish Commission will undoubtedly greatly improve the fishing conditions at the main lake, and in fact of all northwestern Pennsylvania.

Experts have confidently predicted that the improvements now under construction by the Board of Fish Commissioners will result in making the area, which is being developed within the waterfowl refuge, into one of the very best warm water fish hatcheries in the United States.

After a visit to this mecca for wildlife one does not wonder that the area was at one time a favorite hunting ground of the Indians. Indeed the name Pymatuning is of Indian origin, meaning "Crooked-mouthed man's dwelling place". The Erie or Cat Indians occupied the region at a period prior to the coming of white men. The Erie Indians were conquered by a combination of Iriquois and Senecas who waged a war of extermination against the Erie People, and later made this country their regular hunting grounds. In the dim and distant past the area was known and recognized as a favorable place. The ancient mound builders occupied the territory at one time. Along the lowlands of the Shenango Creek numerous remains of the pre-historic mound builders were discovered. Besides low mounds, some 30 to 50 feet in circumference were found.

The area has long been a favorite place for many forms of wildlife. There are records of 244 different species of birds having been found in this section while it was still the Pymatuning Swamp. The region, according to authentic reports, was a favorite roosting place for the now extinct passenger pigeon during the spring and fall migrations. In point of variety of wildlife, however, the species visiting or living in the area never compared to the present abundant population. It is reasonable to suppose that it will continue to increase in attractiveness to wildlife as the area is further developed in the interests of our feathered friends.

THE DOG FOX OF POSSUM HOLLOW

(Continued from Page 11)

did. But it wasn't the same animal that I had seen on the previous occasions. This fellow was larger, much larger, and his speed was dazzling.

It was a long shot. Nevertheless I raised my double and sent both loads rattling after him. Both shots missed their mark and the eagerly anticipated victim literally floated away like a streamlined wraith.

The profound silence that followed my two blasts was suddenly broken by the twin roars of Chet's gun. Then, he in turn shattered the outraged echoes.

"Yoo, hoo," he yelled, "I got 'im—I got 'im, the old son of a gun."

When Bill and I got to him he was holding the animal he had brought down by its luxuriant brush. A quizzically puzzled expression bespread his face as he closely scrutinized his kill.

"What's the matter?" I ventured. "You look as if you had just shot your grandmother"

"T-t-that's n-n-no fox," he stammered.

"By golly," observed Bill, "that looks like one of them wild dogs."

"It is a dog," averred the crestfallen Chet.

"How'd it all happen?" I asked.

"It was followin' Gyp—some distance behind of course," he explained. 'Naturally, I thought it was one of them foxes making a real foxy move, so I let him have it."

"Looks as if the foxes were using the dog as a dupe," theorized Bill.

"It's more likely that this poor chap was carried away by the excitement of the chase," I guessed.

'Well, whatever he was doing he'll never do again," philosophized Chet.

The dogs apparently rejoined each other in the fields at the southernmost corner of the farm. From there they continued on over a hill on the adjoining farm and passed out of hearing While they were gone we ate lunch. After lunch we moved about to keep warm.

The dogs did not return until a couple of hours later and a more tired and crestfallen pair of hounds would have been difficult to find. They had been completely outwitted by what we later came to know (more or less affectionately), as the notorious Possum Hollow fox.

NOTES FROM THE FIELD

"Sometime ago I placed two loads of pomace about 200 yards near the stream below the house. The deer came in and worked it hard both during the day and the night. Later I placed another load about 40 feet from the house. Recently we had about four inches of snow, and they came right up to the house to feed. At present there are two big bucks, one spike, two does and four fawns coming two or three times every day." —Game Protector Clyde W. Decker, Clearfield County.

"There is a certain bear around one of my refuges that persists in tearing down the board and metal signs. If he feels so inclined, he will follow along a wire and destroy as many as twelve in twenty-four hours. I have often heard the bear called the "clown of the woods", and while this may seem funny to the bear, it certainly does not to me."—John A. Hopkins, Game Protector, Warren County.

"On October 6 I killed a water snake that had 17 young inside of her. The young were all about 6 inches long and the old snake was at least 30 inches. I was definitely of the opinion that snakes were born in the spring, but from this observation, I have changed my mind."—John A. Hopkins, Game Protector, Warren County.

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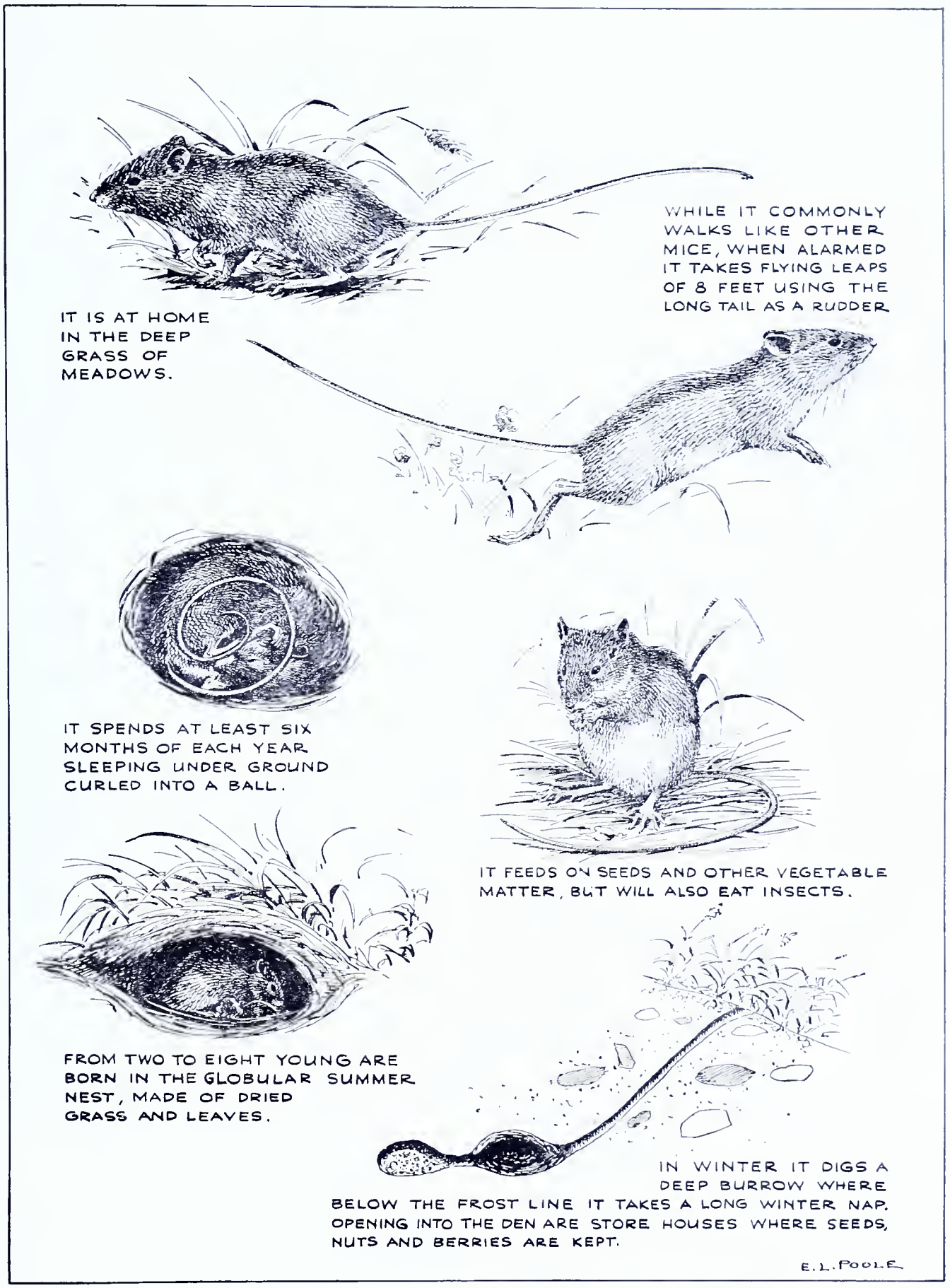
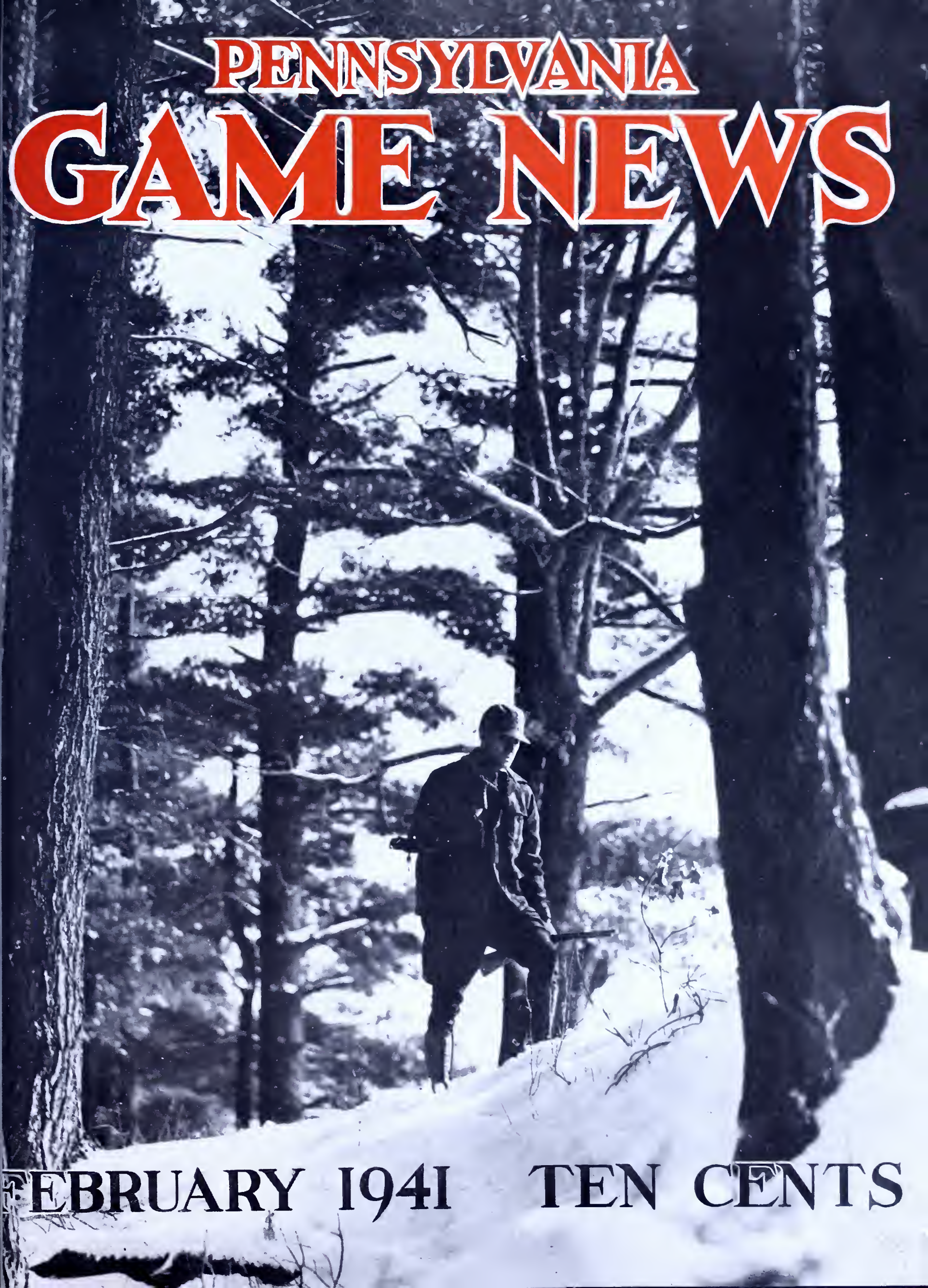
MEADOW JUMPING MOUSE



Wildlife Syndicate, 1940

1940
1941
HAPPY HUNTING GROUNDS
CARROLL

PENNSYLVANIA GAME NEWS



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VOL. XI, No. 11

EDITORIAL

FEBRUARY 1941

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By Archibald Rutledge
Reprinted—Courtesy "Field and Stream"

★

PICTORIAL

★

SPORTSMEN'S QUERIES

PREDATOR CONTROL PROBLEMS

IS the bounty system now in vogue in Pennsylvania still desirable and effective or should bounties be eliminated entirely? Should certain birds and animals now on the bounty list be eliminated? Should others be added? Should present bounty rates be changed? Would some other plan or programs serve equally well or better?

These questions center around one of the most important problems the Game Commission has had to deal with, and because of its importance the Commission recently appointed a special Predator Control Study Committee, which held its first meeting at Harrisburg on January 8, to make a thorough study, and to suggest means by which Pennsylvania's methods of controlling predators might be improved.

The Commission has paid more than $2,300,000 in bounties, exclusive of administrative expenses, since April, 1915, a gross average of more than $100,000 annually. It feels that the continued expenditure of such a vast sum merits a thorough study of the system in order to determine whether the benefits derived justify the investment.

The Federal Government, and most of the states, frown upon bounty systems of any kind, feeling them to be wasteful, inefficient, and expensive. Many wildlife managers confirm this belief, claiming that there are factors much more important to wildlife abundance than predators, namely, lack of food and cover, disease, overshooting, etc. It has been pointed out again and again by various federal and state officials that the activities of man and the elements are by far the most destructive agencies affecting wildlife, and that predatory creatures constitute a minority factor.

Regardless of any beliefs or opinion, however, the special committee will attack the problem from a purely unbiased standpoint. It was brought together without any pre-conceived ideas on the subject, and there is no doubt that it will view all angles of the problem open-mindedly.

That it has a big job before it goes without saying. Bounty has been paid in Pennsylvania since 1683, when a reward was offered for wolves only. The money itself was paid in English currency on order of a representative of the Crown. From that time to this predatory creatures of one kind or another, both mammals and birds, have been included. With such a traditional background to penetrate, it can readily be seen that the most impartial and intelligent approach to the problem is necessary.

It has been argued by many that the removal of bounties would in no way effect control of the species which prey upon domestic stock. Their opinion is that the creatures would be controlled anyhow through the self-interest of the persons who own such stock.

The new Committee, which met with the Commission, members of its Field and Office Staff, and Dr. Ira N. Gabrielson, Chief of the U. S. Fish and Wildlife Service, Washington, D. C., and others invited to be present, organized itself immediately following the joint gathering by electing Dr. R. L. Watts, Ex-Dean of The School of Agriculture, State College, and prominent in sportsmen's affairs for years, as Chairman; Dr. Arthur Henn, Curator of Ichthology of the Carnegie Museum, Pittsburgh, and State President of the Izaak Walton League of America, as Vice-Chairman and Charles H. Nehf, sports writer, Allentown, long active in the Southeastern Division of the Federation of Sportsmen's Clubs, as Secretary.

Other members of the Committee, which comprises altogether twenty outstanding citizens from all parts of the Commonwealth and represents sportsmen, landowners, raccoon hunters, fox hunters, trappers, fur buyers, bird lovers and other groups, include D. W. Bell, Williamsport; H. E. DuBroux, DuBois; Gerald Edmunds, Palmerton; Benjamin F. MacCartney, Altoona; Jacob M. Phillips, Pillow; Ralph B. Simpson, Warren; and J. E. VanCleve, Waynesburg; all active workers among the organized sportsmen of Pennsylvania; Francis H. Coffin, Scranton, active leader among bird clubs; Dr. Charles M. B. Cadwalader, Director of the Academy of Sciences, Philadelphia; Ray Armstrong, Guys Mills, active among raccoon hunters; W. Newbold Ely, Ambler, active leader among organized fox hunters; Reinhold H. Fricke of the Carnegie Museum, Pittsburgh; Miles Horst, Secretary of State Grange, Harrisburg; William A. Jackson, active leader among licensed fur buyers, Conneaut Lake; Earl Poole, actively interested in the Hawk Mountain Sanctuary, Reading Museum, Reading; S. V. Sedlak, active leader among the organized trappers, Winburne; and Donald Turrill, active among game breeders, Laughlintown.

Pennsylvania Game Food Plot Mixture

Help Wildlife . . .
PLANT A FOOD PLOT

THE season of the year, when it is again necessary to arrange for the planting of food plots, is rapidly approaching.

Public interest in the problem of providing fall and winter food for wildlife becomes more and more widespread each year. Thousands of Pennsylvanians are annually in some manner feeding their feathered and furred friends. They realize wildlife's acute needs during winter months, and that the wildlife supply is governed largely by the numbers which can be brought through the period when the food supply is liable to be very small.

The Pennsylvania Game Food and Cover Plot Mixture was developed at the request of organizations and individuals who wished to assist wildlife by providing food. It has been used with fairly good success during the past three planting seasons in Pennsylvania. It is relatively cheap and easy to obtain. The Commission, each year, contracts with some seed house (low bidder) to furnish the seed mixture. Orders are then sent direct to the seed house by those wishing to purchase it.

As an indication of the interest in food plot planting, more than eight tons of the mixture was planted last spring. In addition to this several thousand pounds were planted by organizations and individuals in other States. In many cases excellent results were obtained. In other cases the results were not satisfactory. Failures were due largely to the wet spring, the drought in certain sections during the summer, to plantings on poor soil where fertilizer and lime were not used, and to planting far more per acre than the Commission recommended.

Bids are now being secured for the mixture to be made up for planting during the spring of 1941. Information as to where the orders should be sent for the material in the spring can be secured by writing the Pennsylvania Game Commission, Harrisburg. Attractive colored cards about 4"x8", with the picture as shown on this page, will be available in the near future. On the back of the card will be planting instructions, as well as information on the contents of the mixture.

Plans should be made early for plots which are to be planted this year. It has been found that many landowners are willing to plant the mixture along the edegs of their fields if the seed is furnished for them. The food plot will attract and hold insect and weedseed eating birds, and thus be of considerable assistance to the landowner in his battle against pests.

The mixture, as made up for planting in 1941, will contain the following grains in the amounts shown for each 100 pounds.

Broom Corn (Dwarf Jap)	20 lbs.	Japanese Millet	13 lbs.
Sorghum (Early Amber)	20 lbs.	Golden Millet	10 lbs.
Sudan Grass	5 lbs.	Colby Milo	5 lbs.
Buckwheat (Tartary)	5 lbs.	Kaffir Corn (Greeley or Highland)	6 lbs.
Sunflower (Small Branching)	8 lbs.	Rape (Dwarf Essex)	1 lb.
Hungarian Millet	5 lbs.	Hairy Vetch	2 lbs.

It should be planted in plots of about ¼ to ½ acre, preferably in long narrow strips. The plots should be located either in or adjacent to good natural cover, such as brushy ditch banks, fence rows, gulleys or woodlots. For best results fertilizer should be used on each plot. In some cases lime also is needed. Consult local agricultural leaders for advice as to the particular requirements in each locality.

Not more than fifteen pounds per acre should be sown broadcast on a prepared seed bed from about May 15 to June 15. Best results have been obtained from sowing by hand, as a drill does not distribute the various ingredients equally because of the different sized seeds.

It is to be hoped that many additional organizations will arrange for the planting of one or more game food plots this year in order that the supply of wildlife food may be greatly increased.

Looking Ahead

By Ross L. Leffler*

IN these days of foreign conflict and general unrest and uncertainty our natural resources are assuming more importance to our people than they ever have before. Manifestation of this most recently acquired conservation-mindedness can be seen everywhere. The National Government has not only contributed generously to other worthwhile causes! it has contributed just as generously toward the protection of our soil, our forests, our wildlife and our fish.

The conservation departments of the various states have awakened to the dire need for preserving these natural resources and are doing so through federal aid and by increased local appropriations. They are developing long-time management and research programs which are bound to have their effect if they are supported enthusiastically. Thousands of sportsmen's organizations and other groups interested in our natural resources, to say nothing of the industries that provide the arms and ammunition, fishing tackle and all the other paraphernalia that is needed to enjoy the out-of-doors, are likewise contributing much to this great cause.

In the past we wasted many of our natural resources. Let us hope we are not too late to save what we have left. It has been estimated that somewhat over 300,000,000 of acres of land in the United States have been abandoned or are on the road to destruction because we thoughtlessly denuded our forests, drained our lakes and swamps. The rainfall which should have soaked into the soil on the uplands where it fell now rushes down the valleys into the lowlands. We have no more new lands, therefore, only by studied processes of saving what we have left, and attempting to replace what we have so ruthlessly destroyed, can we avoid an ever-increasing margin of human poverty.

If we fail to preserve our natural resources it will not be because opportunities and methods are not available. It will be because we lack the farsightedness that our ancestors lacked. It will be because we are too indifferent or conceited to profit by the other fellow's mistakes. I am sure that the people of Pennsylvania shall not be found wanting in their support of any long time programs which the conservation agencies of this Commonwealth undertake. We have been blessed with a rich heritage of natural resources, but because we have always had them we are apt to take them too much for granted. That is something we cannot afford to do. Pennsylvania, through the farsightedness of early day conservationists, has gradually been rehabilitating all of her natural resources. It has been an uphill grind, nevertheless it has succeeded to the point where today the Keystone State has been furnishing wholesome recreation and good hunting for more than 600,000 people every year for the last ten or fifteen years—in fact, ever since the Hunters' License Law of 1913 provided enough money to work with.

Today, however, the scene is changing again, and the Commission is forced to **look ahead**—to develop new and long time policies so that it can continue to furnish sport and recreation for the people of this Commonwealth in the years to come. During the past ten to fifteen years the functions of the Commission have changed materially. In the early days the main function was the protection of game. This involved law enforcement, establishment of seasons and bag limits, proposed game legislation, development of game refuges, etc. In more recent years restoration of the habitat and management of the take have become a greater problem than protection was in the early days. Improved highways have opened up game lands hitherto almost inaccessible. New species of game have been introduced. The size and type of game refuges have changed. Food and cover development has become a major problem. Research, education, and public relations must be emphasized even more.

The Commission is doing everything it possibly can, notwithstanding the many complex problems it has to deal with, to preserve the wildlife of the Commonwealth for our future recreational and economic needs. So far it has met and solved most of the problems which have arisen. Others have only been partly solved; some not at all. Still others are arising, many of which may require drastic changes in methods and policy in order to deal with them properly. Who knows what the future holds in store? Living in a modernized world, a fast-moving, breathtaking era, a mechanized world, as we do, the matter of preserving and perpetuating our wildlife and other natural resources will no doubt be more difficult than ever before. Consequently, we must look far ahead. Not one, two, but fifteen, twenty, yes fifty years or more from now.

As I look upon the future conservation program not only for Pennsylvania, but for the whole country, three important factors, one equally as important as the other, are impressed upon me—education, research, management. We shall have to begin educating our school children concerning the value of our natural resources, starting in the elementary schools by developing an attitude toward the protection, preservation and wise use of those resources, and continuing on through the higher grades both in theory and in practice. If such a program had been under way when you and I went to school we would not be faced with so many complex problems of managing our natural resources today. There would have been no denuding of our forests, no dust bowl; our water tables would not be at such low levels, and our streams would not be so badly polluted.

We must also carry our message to our junior and senior high schools, to our colleges and universities. Particularly must we equip the teachers in our State Teachers Colleges to teach the elementals of conservation. Upon the burden of them rests the responsibility of whether or not we have any natural resources to amount to anything in future years. We must carry still more of it into our colleges and universities so that there will be a desire on the part of more and more young men and women to enter the field of conservation.

We must educate not only in the schools, we must carry the message to every organized group of young people within the Commonwealth—the Boy Scouts, the 4-H Clubs, the Future Farmers of America, and others. We must get every group working in the interest of conservation. Both of these movements have already been started in Pennsylvania, and your support of them will be very much appreciated when they become actively under way.

Another one of the major factors that will enter in the conservation program of the future will be that of research. Upon research will depend to a great extent the formation of future policies and procedures. More basic research, particularly in the field of wildlife, will have to be carried on at our colleges and universities. More stress must be laid on wildlife ecology—the relation of wild birds and animals to their environment, to the biological aspect of wildlife as well as the pathological, and other research programs.

Pennsylvania shall continue its intensive research program, working in conjunction

(Continued on Page 30)

*President, Pennsylvania Game Commission.

The Eastern Goshawk in Pennsylvania

By Robert D. McDowell

(Editor's Note: This is the second of a series of articles on Pennsylvania's birds of prey.)

Distribution

THE Eastern goshawk *(Astur atricapillus atricapillus* Wilson) breeds in limited numbers in the forested areas of Northern Pennsylvania. During the winter periods of migration it occurs in varying numbers throughout practically all sections of the Commonwealth. (See Figure I).

During the three annual periods of bounty payment ($2.00 for each adult bird, $1.00 for each fledgling) extending from November 1, 1937 through May 31, 1938, from November 1, 1938 through May 31, 1939, and from November 1, 1939 through May 31, 1940, a total of 278 specimens presented in claim for bounty was available for study purposes. During these three seasons there was no unusually heavy southward migration of the species such as that which occurred in the winter of 1936-37 when 1080 goshawks were probated. Furthermore, only 4 fledglings were included in the group under consideration.

Weights and Measurements

The 278 birds studied included mature and immature birds of both sexes. Those which had not as yet undergone their final adult molt, which occurs when the bird is approximately 16 months old, were classed as immature.

As in the case of the Great Horned Owl, discussed in a previous issue, the female of the species is, on the average, much larger than the male. In Figures II and III, below, the sexes and ages of the birds received, together with the weights, length and wingspread measurements, are presented. These were obtained in the same manner described in the previous article above mentioned.

It may be of interest to point out that, in the case of the males and females alike, the average length of the immature birds is greater than that of the mature birds.

Those birds indicated in Fgure II as birds of unknown sex include 7 which were too putrid to allow for study, 7 which were already dressed when received, and 8 individuals so badly mangled by high powered rifle bullets that positive identification of their sex was impossible.

Food Habits

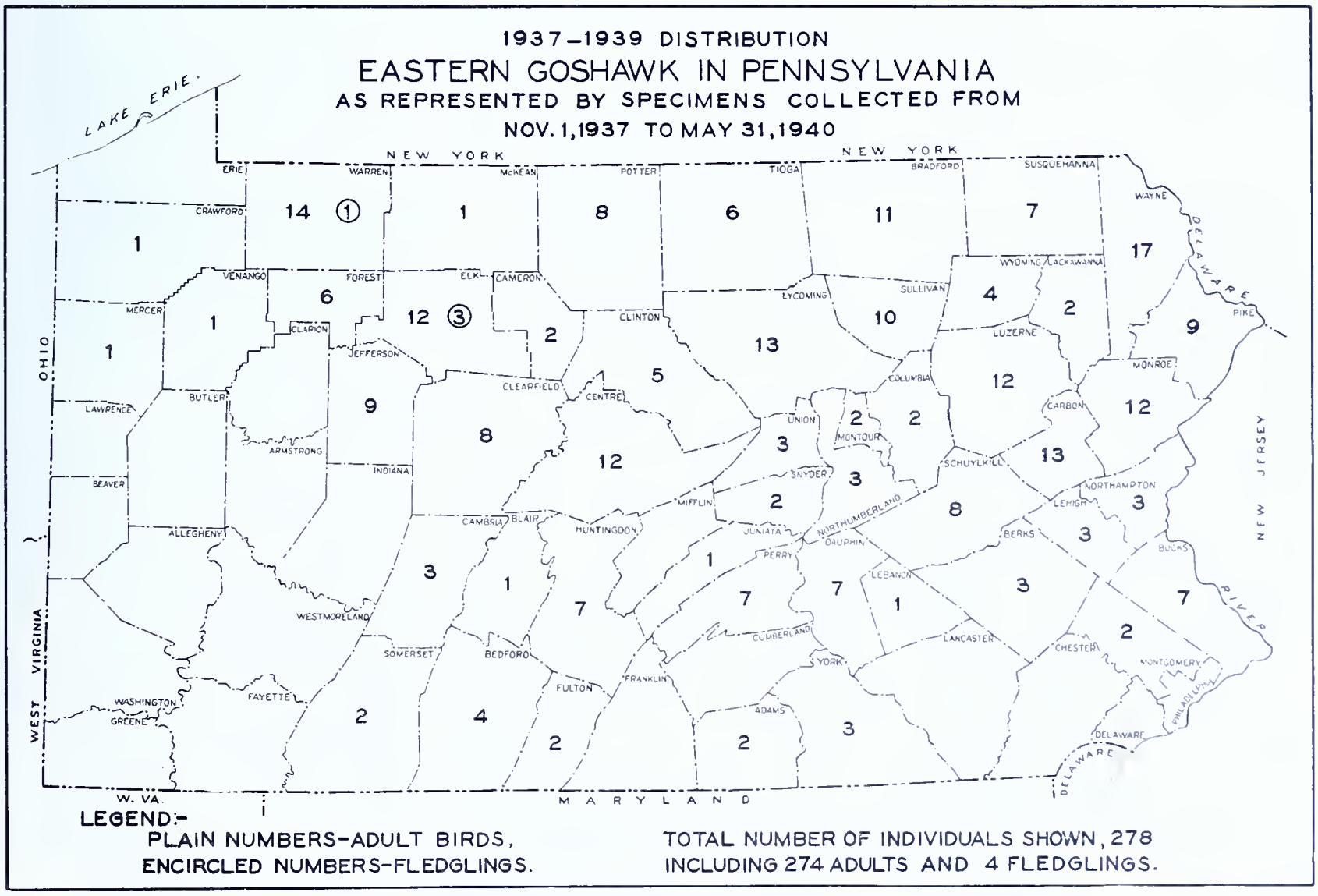
Of primary interest to game administrators and hunters alike, is the prey eaten by the goshawks which were examined, listed in Figure IV.

The fact first noted upon examining the table is that this hawk definitely belongs to that class of predators which largely prey upon those animals classed as game under present Pennsylvania statutes. If domestic poultry and insectivorous birds be included in the aforementioned group, we find that this classification comprises 74.5% of the total diet as revealed by the study of the 101 birds which contained food in their stomachs. Two mice, one rat, and one crow, prey which we may class as representing usually considered injurious to man, comprise 3.7% of the total diet. Considering the flying squirrel, the shrew, and the three chipmunks as falling into a classification of neutrality, i. e. neither harmful nor beneficial to man under normal conditions, 4.6% of the diet of this hawk falls into that category. Further considering the fact that 17.0% of the food represented the remains of certain mammalian and avian food which could not positively be identified, we can certainly relegate the goshawk to that group of birds generally considered as undesirable predators.

Conclusions

Despite the fact that the goshawk, as shown by this stomach analysis work, is our most destructive avian predator, the writer feels that the payment of bounty for the destruc-

(Continued on Page 31)



DO YOU CLEAN YOUR GUNS?

(Before or After Shooting)

CONQUERED Norway, Poland, Holland, France and other Countries of Europe and Asia will not be able to keep many arms hidden, nor to keep them very long. Arms hidden in strawstacks, cellars and walls will not be well cleaned, nor preserved from outside and inside corrosion. They will quickly deterioate to uselessness.

Recent advertisements in American magazines asking for private contributions by American sportsmen of guns for British civilians brought a heavy response. A gun to use against a sneaking enemy saboteuor (sp) and parachutists now is in the hands of many an Englishman and Irishman who otherwise might have remained about as defenseless as a sheep. Fists and pitchforks are helpless against **armed** marauders, you know.

But these contributed arms, given to Englishmen who did not have guns of their own, also likely will have only a short life. They will soon also deterioate to uselessness. The reason is that rigid anti-firearms laws and regulations of England have kept knowledge of firearms and of their use and care from the great majority of citizens. Now that the emergency has come, there isn't time for them to learn the lessons necessary.

Over here, we so far have been able to fight off the fanatical anti-gun moves made in the various States, and in Washington. We are still able to keep most of our guns at home. If yesterday's pet rifle or shotgun becomes rusty, nothing much has prevented us, up to now, from replacing it with another, if we have the price. But in a world suddenly turned to military matters, a new sporting arm may presently be very hard to get.

In short, all of us had better brush up on the technique of keeping our good **old** guns serviceable indefinitely.

Your modern cartridge may or may not be of the so-called "rustless" or "non-corrosive" type. A great deal of the sporting ammunition now sold is of this kind; but some of it is not. Very little of the military ammunition is of that kind. Since the outbreak of the war, it is likely that sporting cartridges have been, and will continue to be, loaded with any kind of primers and powder the factories have on hand, and that will shoot well. You may therefore use the rust-producing kind of ammunition without realizing it.

Now for a little primary stuff. We've got to keep our shotguns, rifles, pistols and revolvers free from rust, both inside and out, if we want them to shoot well, or even to shoot at all. Rust of steel is the combining of a little of the pure iron with oxygen of the air, aided by moisture, and hastened by warmth. The red material resulting, flakes and crumbles away, leaving a hog-wallow. When you "remove rust", you take away part of your gun. And you can never, never put it back, nor fill the holes left.

You prevent rust by keeping air and moisture away from the steel, usually by means of a film of oil or grease. Also you prevent prompt, heavy rust by keeping away salt, and other such chemicals. It all sounds very simple and easy. Actually it is rather easy to prevent rust, when you do your part just right. But the learning how, and the doing it, are so tough that even the army required twenty years and thousands of ruined guns before coming around fully.

The old style primer in the cartridge is responsible for most of the rusting of gun bores. It continues to be used largely, because it gives a large, hot stab of flame sure to fire the powder charge fully, even after years of storage. But it contains, and leaves in the gun bore, a salty residue. That salty chemical acts like any other salt on steel—it attracts moisture from the air, and actually causes rust and corrosion.

And worse yet, this salty residue will not dissolve in oil. You can slosh all the plain and fancy oily preparations you can lay hands on through your shiny gun, and some of the trouble-producing stuff will still remain on the gleaming surfaces you want to protect. You can wipe with dry cloths and patches all day, and you can't brush all of it away.

Clean a gun fired with an old-type primer in the usual oily way, only; and stand it away; and in two days or two months, depending on the temperature and degree of moisture in the air, it will be discovered with a beautiful coat of red rust.

The reason the big bores usually rust less than the small bores is that the greater amount of powder gases, and powder ash, dilute the constant amount of primer salts more. You remember that before the coming of rustless priming, despite the most faithful oil cleaning, we seldom succeeded in keeping the 22s and 25-20s from rusting.

The newer primers, "rustless," or "non-corrosive," or "sta-clean" or by whatever name called, depend for their fire upon chemicals that leave no salty residue. Their ash is neutral as to steel. It will not attract moisture. It will not **cause** rust.

But nothing in them, nor in the powder fired by them, will **prevent** rust. A gun fired with a rustless cartridge is left with a dry, clean, polished and totally unprotected surface inside the bore. You know what that means. Allow an opened pocket knife to lie outdoors about three days, or just over night near seacoasts, to demonstrate, if you don't. Rusting comes sooner, and proceeds faster and deeper, in warm weather than in cold; and down cellar or under a leaky roof than in a dry place.

Well, here is the cleaning formula that will **prevent** rust.

The salts and residues that cause the trouble will dissolve in water—just plain water.

Therefore wash out your gun with water, and dry it thoroughly, every time after you shoot it. Water will remove every trace of the residue, given two or three minutes to work on it.

If you want to make the job of drying the bore quicker and easier, have the water **hot.**

By J. R. MATTERN

With a bolt gun, which can be cleaned from the breech, put a pint or quart of boiling water in a can on the floor, stick the gun muzzle in it; then with rod and patch, pump the water up and down in the bore for the two or three minutes. A little soap in the water often helps to remove the powder fouling more completely.

Remember that the troublesome salty residue can cling to the steel under powder ash, under flakes of metal from the bullets or shot; even under grease and oil applied over it. It can cause rust right under oil. It is better, therefore, to use a brass brush in the bore to loosen any adhering dirt and flakes, so that water can get at the salt beneath. Use the brush first, then the water. Dry the bore, and only after that, apply oil or grease.

Summarized: effective gun bore cleaning is:

1. Brass brush the bore, a dozen strokes or more.
2. Water applied to bare steel, two minutes or more.
3. Dry the steel completely, using five or more cloth patches (heat helps).
4. Oil or grease coated in film over all surfaces of the bore.

Now the water would not be needed if you and others fired non-rust type of ammunition exclusively. But if at some time in the past a single salty type cartridge was fired in it, rust may appear under later grease or oil. Therefore, better be safe. Use the water.

You may have observed that certain 22 caliber rim-fire rifles have been used for years without cleaning; and their bores still remain fairly bright and rust free. But their clean condition is due to the double protective feature—an exclusive diet of non-corrosive cartridges, **plus** the lubricating grease on their all-lead bullets. This bullet lubricant leaves behind in the 22 bores a film of grease melted and spread into every nook and microscopic tool-cut of the dry steel. The dried steel bore surface is protected from moisture in the air.

No such condition is found in shotguns—they have no grease in their cartridges (except a few special loads with lubricating wads). Shotguns should be water-cleaned before oiling.

Nor can such, a 22-caliber, lead-bullet argument be applied to any other rifle using metal jacketed bullets. The larger bullets, beginning with the 22 Hornet, and going right up to the modern 375 Magnum and 45-90 smokeless loads, are loaded and fired dry and totally without lubrication. They leave the barrel steel clean and dry—quite inviting to attack from the moisture from the air.

The time to do the cleaning is within a very few hours of firing the gun. Certainly it should be done by that same evening. A good coat of rust can form under warm, moist air conditions in five hours or even shorter time. The person who leaves a gun over night without cleaning is not a rifleman or sportsman. He is just a gravy-skimmer and daisy-picker; springing from the tribe who practice gun cleaning **before** shooting rather than **after** shooting.

At that, there is something to be said for a before-shoot cleaning. If you use heavy oil or grease, which are required to make sure of a protective film over periods of weeks or months, your first bullet or shot will go wild if it has to shove its way or wade up a barrel so obstructed. Its progress in the grease is comparable to driving your car through a foot of fresh snow. In fact, given enough grease in a bore, the bullet may burst the barrel.

Dust accumulates in oily bores. Much of it is gritty. Therefore you have a grinding compound in front of that first bullet. In a rifle bore you are dealing with steel cut to half a thousandeth of an inch. Scratch or burr it, or wear it away, and you make the precision tube a little lop-sided. The effect will be like taking one of the little screws out of the balance wheel of your watch. Don't be surprised if it never again performs as well.

Oil the outside of the gun every time after it is touched with hands. All human skin is slightly moist, and some of the skin-moisture is salt, which will cause rust. Keep an oily rag hanging nearby, or pushed through the trigger guard for the purpose. Some shooters wear gloves slightly oiled when handling their guns; and store the gloves with the gun.

If some of your daintier friends won't want to handle your guns because of getting oil on hands, that shows how far they have drifted from hard realities.

Don't forget to clean the face of the bolt with water; and to dry it and oil it, including the primer pin hole. Don't forget to free the gun chamber from dirt and from oil and grease by special use of a larger patch on your rod, for the purpose. Don't take apart a take-down rifle unless you have to, even for cleaning. They never go back together with exactly the same sighting zero, you know.

A good motor oil is about as effective a steel protective material as you need for short storage periods. Clean, pure vaseline film stays in place over longer periods without draining off. Of course the standard-name gun oils and greases are usually fairly good, too.

THE CURSE OF AN ALBINO DEER

"Want me to shoot your horse?"

A blanket dropped over the sleeping Poconos. The night-wind ended the interlude of twilight. Here and there, like puny adventurers in the broad darkened forest, the lights of hunting camps awakened. The first day of Pennsylvania's deer season was history.

Dad Keyes, housekeeper for Forest Echo Hunting Club, grinding heavy teeth across a chew of cut-plug, slammed a steaming dish of turnips and potatoes on the rough-plank table. "There she is, gents—woff 'er down!"

No soldiers ever more willfully obeyed a command. Fifteen hungry hunters set to on Dad's tempting dish, and the kerosene lamp that lighted the feast flickered with the breeze of passing arms.

"Wait a minute!" bawled a tall, lanky hunter, who, measured by softness of face and delicacy of manner, was a professional man. The speaker rose to his feet.

"Oh yeah," Dad Keyes said, slipping into his seat. "There's a preacher here with us. Reverend Wind, sound off!"

Automatically, heads lowered. Reverently, prayers soothed forth. And immediately thereafter, the assault on the turnips flickered the kerosene lamp again.

The busy supper was enacted in the long log-house that harbored hunters who were members of Forest Echo Hunting Association. The room was insulated from wintry blasts by a layer of plywood, which material also served as ceiling. Pictures of hunts, maps, gun-rack filled with high-powered rifles, clothes-hooks covered slovenly with sweat-soaked hunting garbs, a calendar, an open-faced cupboard now nearly bare of contents, and lastly a large Pyrene fire-extinguisher, clustered the walls. The room had backwood's furnishings: plank bunks, made restable by conventional but ancient mattresses; a log stove, long, heavy looking, flanked with tin on three sides; battered chairs that were by-products of some expanding household budget; and the table, rough-hewn, solid, kerosene-lighted.

Of course there were tales to be told. The best part of outdoor life—that is, companionate outdoor life—is the tale-session in a warm and smoke-filled hunting camp.

Dr. Hugh Cleming, "Ample" Doc (and he was well named, the five feet six and two hundred pounds of him), inaugurated the evening's tale-session. Doc had a great reputation as a teller of tales and as a practical jokester. Cigar in hand, he unfolded a yarn about a fellow who got buck fever and couldn't shoot at a passing buck deer. "And he was an albino deer, to boot," he concluded.

This provoked a chorus of "Gosh, if I'd have had a chance like that!" "I've never seen an albino yet!" "I'd have plugged that fellow as sure as shootin'!"

Dad Keyes was very serious. He broke forth with, "I don't believe I'd shoot an albino deer!"

"What!" cried the Doc. "Why not?"

"Well, superstition, that's all. The Indians used to worship them. They claim it's bad luck to shoot one."

"Rubbish!"

"That's right. How about this fellow over at Dingman's. He shot an albino deer. Two days later they found him dead."

This provoked a laugh. "Yeh," said the Doc. "and William Jennings Bryan died a few weeks after he tried to prove man didn't come from the ape. So what." Then, noting the solemn-faced Reverend nearby, he smiled, "What's your opinion, Reverend Wind?"

The gaunt preacher spoke through the smoke of his cigar: "I'm inclined to agree with you, Doctor. Shoot the albino, I'd say."

It was the preacher's first stay at camp. In fact, it was his initial experience as a deer hunter. Raised near Philadelphia, and having spent a totally urban life, he had never seen a deer. All had intended to get laughs out of him, but thus far he had behaved like a veteran. He was the type of minister who was out to show the boys that men of his profession were as great sports as those of any other profession. He would have been, in the early West, as one of Peter B. Kyne's 'soul-trappers' with an ivory-handled six-shooter by his side.

"We've got to get him!" said Doc.

Dad Keyes shook his head. "I'm still for letting the wild devils run," he maintained.

A gust of wind announced that the door had opened. A chill swept the heat of the fire into temporary obscurity. Jim Wayne, tall and heavy-set, trudged inside, stamping the circulation back into his feet. He was garbed like a hunter with the traditional big patch of bright red between his shoulder blades. He looked glum. Everybody hailed him in merry tones for he was well-liked. He didn't belong to the camp but farmed nearby, being a Pocono native, and owend the property on which Forest Echo camp stood.

Doc bawled out, "Get your buck, Jim?"

"Yep."

"How many points?"

"Eight."

Jim's voice was spiritless.

"Heck, you don't sound a bit merry about it."

"It ain't the buck that's got me down. The buck's a dandy."

"What's on your mind then, Jim?"

"I'll see you later, Doc." Then, raising his voice as if in a gust of energy, 'How are you boys doing?"

"We ain't," someone announced.

"Didn't any of you get a shot?"

"Doc saw a doe, he said," Keyes replied. "Most of the boys ain't even seen a rabbit."

"Well, rabbits is scarce. Anyhow what good would it do to see one? They ain't in season."

"No, but it kinda lifts the morale to spot one."

Conversation drifted on, encompassing divers subjects that ranged from jokes to the inevitable bear stories.

Jim Wayne drifted from the crowd and called Doc Cleming to him. "Doc, I got a problem," he said.

"I knew you had something on your mind," Doc replied. "What's up? Anything I can do to help?"

Jim's face was heavy, his eyes misty, as he answered, "I want you to shoot my old white horse Katy." His voice was earnest.

Doc started. "Want me to shoot your horse?"

"That's it."

"What for?"

"Old age, Doc. She's a poor old soul. And I've got so attached to the beast that I just can't do the job."

"I understand," Doc replied kindly. "Sure, I'll shoot her." Then his eyes focused on Reverend Wind, who smoked a ciger at his roost by the stove. "By thunder!" he whispered, struck with an idea. "Say Jim," he said, "will you leave your horse in the meadow tomorrow?"

By JACK ANDERSON

Illustrations by
L. E. Carroll

"Sure, Doc," replied Jim. "Gladly Only please shoot the animal real merciful like. A swift death, please. For old Jim, eh?"

"Sure!" Doc promised. His face revealed an unusual excitement. After Jim had gone the doctor approached the group who chatted by the stove and waited for a lull in the conversation. The lull was long coming, for Reverend Wind was elaborating on his day's experiences. Nothing had happened to the man but the old preacher had a great gift for oratorical discourse.

Finally Doc slipped in. "Well boys," he announced, "there's an albino deer about."

His companions eyed him suspiciously. That is, all save Reverend Wind, who betrayed great excitement.

Of course most of the boys knew Doc. They knew him very well. They also recognized the light in his eyes, the nervous twitch of his mouth that just bordered on a smile. They ventured a smile in return.

"How do you know this, Doc?" the Reverend wondered.

"Jim Wayne just told me."

The preacher uttered "Gosh!"—which was as close as he ever approached to a curse. "Why don't Jim get him?"

"He's got his buck."

"That's right, he did say that."

Silence. The preacher meditated. Merry eyes slanted on him. "What are we going to do?" Reverend Wind inquired at last.

"We've got to get him," Doc said, throwing determination into his voice.

Dad Keyes took up the cry. "But I've given my opinions on them critters, I'm out."

"Jim told the doctor," another ventured. "Let him go after the deer."

"I second that motion, in all fairness," said Reverend Wind.

"And," continued the voice, "since you ain't ever seen a deer, I motion you accompany him for the experience."

The preacher wavered. "Now, I hardly think that would be fair—to you boys," he said.

"That's agreable to us," the boys unanimously agreed.

"Gosh," said the preacher.

"Well, that settles it. You won't back out Reverend Wind?"

The preacher braced his shoulders. "Certainly not!" he retorted staunchly.

Dawn never came. That is, night melted into a drab, cheerless grey, and this grey was to be the day. Clouds of mist rolled over the steaming forest. A damp chill prevailed. The laurel and rhododendron were folded by the cold. Trees stood miserably and silently about, as grim as the weather and as colorless as the light-starved sky.

Doc stepped into the damp chill, his 30-06 beneath his arm. He shuddered, choked to keep a last fragment of egg in his stomach, paused to strip on his gloves. "What a miserable day," he growled.

Reverend Wind shivered nervously by his side. "Does one hunt on a day like this?" he asked.

"Sure," Doc replied. "It's tough, but all in the game."

"It is miserable. I guess I'll never make a hunter."

Doc decided it began to sound like a stall so he started out beneath the dripping birches. "Come on," he called. The preacher stumbled behind him.

"It wouldn't be hard to get lost on a day like this," the preacher commented after a short while

Doc pondered over this. No, he told himself. it wouldn't, and he resolved to take great care. He was a poor woodsman as far as directions were concerned. His plan was to head into the forest, circle, come out in the rear of Jim Wayne's pasture, from which point no buildings were visible. Here he'd shoot his albino deer.

The forest was difficult traveling. Each tree that was touched responded with an icy shower. Shrubs and laurel soaked the pantslegs. The cold reached its damp fingers through every crevice of the hunting garments.

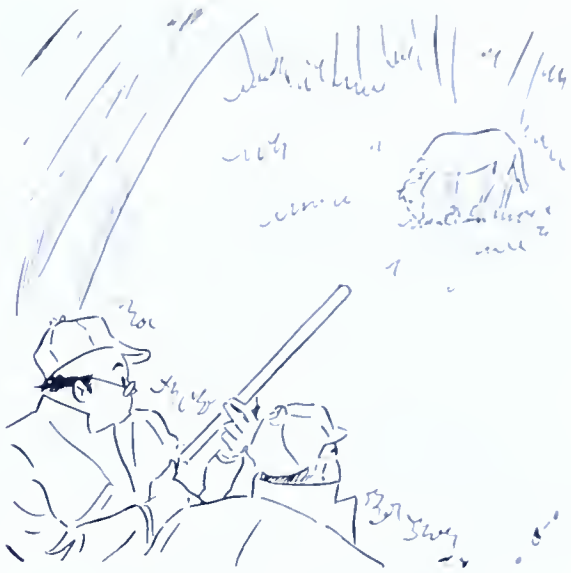
Ordinary woods-travel was difficult for Doc. Travel when each tree and landmark appeared identical was about impossible. Ere long Doc wished for a compass, convinced he was lost. He said nothing but stumbled and weaved through the net-work of windfalls, scrub oaks, huckleberry patches, green briars, laurels, brush and vines of every description. He wheezed and panted and blasphemed, and behind him the preacher did likewise, substituting a rather ineffective "Gosh!" for the doctor's more vile epithets.

Doc was about to reveal his predicament when he noticed a clearing ahead. And in the center, contentedly dibbling wintergreen, was a large white horse. Doc glowed inwardly. He assumed an attitude of great excitement, laid his finger aside of his nose, pointed. "The albino!" he cried.

The preacher's eyes widened. He looked as directed. He spoke with difficulty. "It's a little foggy," he whispered, "but that does so look to me like a horse."

"Horse my eye! That's a deer!" Doc slowly elevated his rifle, aimed, fired. The explosion

The cold reached its damp fingers through every crevice of the hunting garments.



"Horse my eye! That's a deer!"

recoiled him into the preacher. The report of the gun and a loud outcry obviously from no other species than the domestic horse filled the air almost simultaneously.

"Gosh!" exclaimed the preacher. "It - it was a horse!"

His eyes grew as large and glassy as marbles. "My reputation! Your reputation! Our reputation!"

"Let's get out of here," cried the doctor.

"It wouldn't be fair to run . . ."

The doctor was on his way, thrashing the brush.

"Oh, gosh!" cried the preacher, following him. "It's me for home—not camp—but home! And we just must pay for that horse!"

Doc smothered a hearty laugh, keeping it down to a smile. Just wait until the boys at camp heard the story!

The trip back to camp seemed long, unduly long. Doc cursed the day, remarking to himself that distance even lengthened at such miserable periods of weather.

Back at camp most of the boys had deserted the hunt for the day and were gathered about a roaring log fire. Reverend Wind faced these men with a flushed face and obvious signs of nervousness. But words failed him, probably for the first time in his life. And Doc, unable to control himself any longer, doubled into the heartiest guffaw he had ever enjoyed.

The other hunters joined Doc. The preacher was grave. "Don't luagh, you fools," he cried, "the doctor's hysterical. He pulled a dreadful stunt."

Doc's merriment continued unbroken until noon. Then Jim Wayne arrived, as damp and gloomy as the weather. "You're a heck of a pal," he told Doc.

The laughter ceased abruptly. The room enjoyed a strange silence. "Why, what do you mean?" the doctor wondered.

"You know. Katie."

"Katie?" Doc echoed. "Ain't she dead?"

"Dead? She was nibbling dried grass a minute ago."

Doc swallowed hard. "I hit her. Sure to hell I hit her. Now she musta been nicked, at least?"

"You ain't been near the place. Doc. Cut your joking."

Osage Orange and Wildlife

By Douglas E. Wade

THROUGHOUT Pennsylvania, with the exception of the north central and northeastern counties, remnants of Osage-orange *(Maclura pomifera)* hedges and individual trees still may be found. In the middle of the 19th Century, before barbed wire was invented, Osage-orange trees were widely accepted as a living fence material. Seed companies in Texas and Oklahoma did business on a million dollar scale. With the advent of barbed wire, power machinery, increase of land values, widening of highways, interference of hedges with electrical and telephone lines, the discovery that Osage-orange was an alternate host for San Jose scale, and a tendency toward "slick and clean" farming, the hedges disappeared rapidly.

Many wildlife workers have recognized the cover value of this plant. Leopold (4) writes very extensively about it. Bogardus (1), one of the early thinking sportsmen, in 1874, attributes the increase of bobwhite quail in the Middlewest to the cultivation of land and the **growth of Osage-orange hedges.** Van Dersal (5) has recorded that the fruit has been found in the stomachs of the Blacktailed deer, and that it has been utilized by the Crossbill and the fox squirrel. Whitaker (6) believed that this plant may have been responsible for the increased range of the fox squirrel into the prairie regions of Kansas.

While engaged in fur animal work in central Pennsylvania, I had an opportunity to make repeated observations on the uses of Osage-orange by wildlife. Most of the critical observations were confined to the remnants of a hedge in Snyder County at the confluence of Penn's Creek and Middle Creek.

Gray Squirrels dined off Osage apples in the crotch of this tree.

Muskrat plungehole with fragments of Osage-orange seed coats left on snow.

In the Fall of 1938, a cursory examination at the above mentioned spot led me to suspect that gray squirrels and muskrats were utilizing the seeds of fallen Osage-orange fruit. During the winter of 1939-1940, this same spot was re-checked on four different occasions during November, December, January, and March. In November and December, low water levels facilitated observations on muskrat holes. Bits of "hedgeapples" were found in the entrances of holes, on slides, and on definite trails which led from the holes and slides to the hedge trees. Observations in January and March, made while snow was on the ground, convinced me more than ever that muskrats had made use of the fallen fruits.

On each trip, I had flushed pheasants, rabbits, gray squirrels, crows and small birds from under the hedge trees. The evidence was clear that gray squirrels had found this spot a choice feeding ground. The crotches of the Osage-orange trees and other trees, entrances to den holes, and ground sites had served as dining tables. Uneaten portions and fragments of the fruit were visible in crotches and den entrances as high as thirty feet. There were seven known pairs of gray squirrels in the immediate vicinity (roughly two acres of land).

According to track signs, the pheasants, rabbits, crows and small birds had dined off the shucklings and seeds left by the squirrels. In one case, there was indication that a skunk had at least investigated a pile of fruit. Farmers living in the vicinity told me that they suspected certain waterfowl had eaten the fruit during the fall. I am unable to confirm these reports.

Since many cover and food plants are subjected to damage by grazing stock, mice, and rabbits, I made special efforts to investigate the plant from this angle. There was not a single observable case of damage to young or old growth by mice or rabbits. Although I lack evidence on the reaction of farm stock to Osage-orange, it is my recollection that they leave it strictly alone. This may be due to the very sharp thorns which arm the plant and increase its value as cover.

This particuar sturdy hedge fruited well both in 1938 and 1939. During the fall of the latter year I estimated that there were about 700 fruits produced by 33 trees. On January 13, 1940, I made a careful count of the fruit present. Six "apples" were lodged in the trees; on the ground were 294 fruits. The average weight of 66 of these apples, picked at random, was 14.5 ounces. The heaviest fruit weighed 26 ounces, the lightest four ounces. Some of the larger fruits calipered four and a half inches in diamater. A trip late in March, revealed that 146 fruits remained and still were being used by the squirrels.

It appears that Osage-orange is tolerable to a wide range of soil and exposure sites. The sturdy hedge is annually inundated during spring floods and suffers no apparent harm. Neither has it suffered any noticeable damage from light fires. It also does well and fruits on dry gravelly sites. Propagation

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Osage "hedgeapples". Some of these apples weighed 26 ounces and calipered 4½ inches in diameter.

Education in the Snow

By Francis W. Warlow

Tracks led into this hollow log.

AT Carson Long Institute, New Bloomfield, Pa., each Friday afternoon school is cut short—but education does not cease. The younger boys, for instance, report to various clubs whose purpose it is to provide recreation and to develop hobbies. There are clubs in photography, modeling, and hiking.

The last, the Hiking Club, concerns me. I am its director; but I have two assistants, students elected democratically by club members. One of them is the Shepherd, and the other the Assistant Shepherd. There is no reason why we should slavishly follow the practice of electing a President, a Vice-President, a Secretary, and a Treasurer as most clubs do; we have few executive duties, no correspondence, and no dues. We do, however, have a need for qualities that distinguish a shepherd; so we elect several.

The club on its way to feed.

Each week I select an objective: a ridge crest notable for its view, a quarry revealing stratification or rock folding, a fossil bank, a stream valley exemplifying the action of moving water, a big spring whose overflow is choked with water cress, a pond where frog eggs can be gathered in the spring, a patch of hepatica or wild orchids, a grouse covert, or a field where we can kick out rabbits. After the objective is announced, we set out across fields or along woods paths. I am in the lead setting the pace, and my Shepherds are in the rear to prevent straggling and to inform me if my stride is too long.

This procedure is satisfactory during most of the year; but when the snow flies flowers have disappeared, water is icy or frozen, and rock structure is obscured. We must look elsewhere for hike objectives.

We have laughed and thrilled and come to understanding before a score of little adventures in wood and field, on ridge and in valley. We have enjoyed nature, but that is not enough; for if we wish to enjoy anything—the survival of perils by Pinocchio, Gary Cooper, or Spencer Tracy, for example—we must pay some sort of admission. To continue to enjoy the dwindling life and scenery still resistant to the encroachments of man, we must pay admission in the currency of conservation.

Even while making life a cold hardship, nature is still pleasurable to the senses. The flakes filter silently and carelessly down. They caress the cheek and the ground. Imperceptibly they gather, smoothing the earth's harsh contours and softening the starkness of bare tree limbs. Everywhere is a fairyland of powdery beauty; but it is a frigid, secretive beauty. Everywhere fallen nuts, valiant green shoots, and ground berries are hidden under an impersonal whiteness, making the search for food by squirrels, rabbits, and game birds a laborious uncertainty.

Dick of the sympathetic eyes, now a little watery from the wind, says: "I don't blame the birds for going south in the winter. If I had to stick my head in the snow and root around for my meals three times a day, I'd fly south too."

It is true; winter can be uncomfortable. By contrast, the warming promise of spring, the ripeness of summer, and the flaming swan song of autumn are festive. Bright birds sing joyously; trees are fat with leaves, green and then yellow and red; and flowers—weeds too, God bless them—speckle the earth with color. These seasons are like holidays in our towns and cities when flags are out; when gay crepe paper is on floats, on porches, and in store windows; and when bands and orchestras play in the open air. Or perhaps they are like circus days. The circus comes to town with a surge of excitement and triumphs. After it leaves, we must all resume our matter-of-fact lives. There is always the day after which calls us back to work or to school. However, many of us would like to live a year of holidays or to

View south from Limestone Ridge over the valley in which Carson Long and the town of New Bloomfield lie.

follow the circus, most of us must work and stay at home.

And so it is with wild animals and the less colorful and song-full birds. Their home is among us all year. They have a share in the more carefree seasons, but they stay on in winter and live their lives restricted by cold and want. With snow the realization of all this comes home to the Hiking Club. It is urged to help its wild neighbors through to the gaiety of another spring.

Then it is that we get permission from our Game Protector Hugh H. Groninger of Perry County, and his deputy, William S. Briner, to call for several bags of game food at a local mill. The bags of unshelled corn and of mixed grains are deposited outside my door on the campus. They give us objectives on winter Fridays. We draw upon their con-

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One of our shelters.

A GARDEN FOR BIRDS

Photo by Dr. A. A. Allen

Catbird on nest.

FEW, indeed, are they who do not love birds and who are not willing to make some effort to keep these feathered songsters about the home and garden; but fewer still are they who do make conscientious plans and efforts to do just that.

Doubtless, many will be surprised to know that many of the trees, shrubs and vines which furnish food, particularly winter foods, for birds are among our most beautiful ornamental plants. These could, and most certainly should, be more generously incorporated in lawn and garden plantings. Not only will such plants attract and hold birds but, in addition, you'll long enjoy colorful flowers, leaves, fruits and bark. Not only that—you'll soon learn that this particular kind of garden offers much less in maintenance time and trouble than, perhaps, any other.

Aside from the appeal of birds to our esthetic side is, of course, the well known economic value of them. An indispensible adjunct in the horticultural realm we could much better afford, with infinitely more pleasure, to devote more time and effort to the creation of congenial surroundings for birds than to purchase and apply insecticides.

The fundamental musts in attracting birds are protection, food, water and nesting sites. Protection, in a great measure, food and nesting sites may be largely supplied by judicious selection of plant material about the house and garden. The arrangement of such plantings with relation to the home, drives, etc., is, of course, important if an eye appealing, harmonious picture is to be achieved. It is not the purpose of this article to discuss plant arrangement and it is suggested that a landscape architect be consulted if one is not sufficiently versed in this operation. However, helpful suggestions and even plans may be secured from more than a few leading garden magazines.

Far too many homes are overplanted with evergreens. No complementary colors, shapes and textures are present to soften the cold, formal and often uninviting air of these plants. Certainly, it is true that evergreen trees and shrubs give the feeling of life even in the dead of winter but it is true, also, that they do not lend themselves to the seasonal changes our deciduous trees and shrubs take on each year. Interplanted with deciduous plants will surely enhance whatever glory evergreens hold for you.

Let us take a look at a few of the more common plants useful both in ornamental and bird attracting plantings. To name a few, with emphasis in fall and winter value, we start with Black Hawk (Virburnum prunifolium).

Black Hawk is found most generally in the eastern and southern part of Pennsylvania and locally over much of it. Because of its many good habits it deserves to be planted extensively. Attractive white flowers in May, dark green leaves and, best of all, late hanging clusters of dark blue, fleshy fruits (drupes) eagerly sought after by many birds. As a tall growing hedge, easily controlled by pruning, or a single specimen it is superb. Perfectly hardy and disease resistant.

Probably more individuals of more species feed upon the common elderberry (Sambucus canadensis) than any other plant. As a fall and early winter food it stands supreme. If lawns and gardens are not too small to accept them these plants certainly deserve a place. The white flowers are of very sweet odor. There are forms with handsome, deep cut leaves and another with pretty, bright, crimson berries.

The common, native dogwood (Cornus florida) is quite popular but still underplanted. Red branches in a winter's snow enliven any scene where they grow. Masses of white flowers in April or May still continue to beckon visitors to parks and woods. Fewer people, of course, observe the attractive red fruits which finally appear where flowers bloomed. Now these fruits, properly drupes, are eaten by at least twenty species of birds including grouse and wild turkeys. This is an important volunteer, game food plant. The most casual observer cannot avoid seeing how squirrels, too, will cut up the fruits for a delectable morsel found within the hard seed coat.

It is interesting to watch song birds pounce upon the fruits of Arrowwood (Viburnum dentatum) in early fall. This is an especially attractive plant bearing small, very round, blue fruits. The foliage is especially attractive and the plant of good habit. It grows best in a somewhat shaded and damp location. Finches, flickers, waxwings and thrashers are fond of the berries. A handsome plant worthy of every effort to create a congenial situation for it.

If you should desire to screen off an unpleasant view, cover an unsightly building or create a shady spot for a summer day's retreat have you ever thought how doubly effective would be the common wild grape (Vitis cordifolia)? And if you'll give, each spring, just a little time to an intelligent pruning of these vines you'll be surprised at the wealth of light blue fruit suspended from such vines. Not only that—but more birds will visit these vines daily than you ever believed were in your community. They'll come, too, until every last grape is gone. And this last grape will, probably, disappear upon a wish that you had planted more of them. Attractive, shade giving leaves, vigorous, disease resistant, hardy and easily grown are a few more of its attributes.

Another useful, easily grown, vigorous vine is the common Virginia Creeper (Ampelopsis quinquefolia). It is especially evident in early fall when the leaves take on a brilliant red which can be seen for a mile. At least ten species of song birds visit this vine for its small, dark blue berries.

An unpruned specimen or wild growing thicket of native Hawthorn (Crataegus sp.) offers just about everything. Given room, this small tree takes on fine form, produces a wealth of pretty, white flowers which, in turn, are followed by red fruits resembling miniature apples. The added advantage of long, stiff, sharp pointed thorns is appreciated by birds as an escape from enemies. It affords, too, a place to safely nest.

Sumacs are, probably, better known than most plants but, it is apparent, few have given thought to their potentialities as ornamental shrubs. However, these can be the brightest in any kind of a garden and they will, generally, excite praise and admiration by their brilliant, fall plumage. The seed heads remain to add a bit of warmth to a snow covered earth—in addition to filling many an empty stomach of our bird friends. At least fifteen, well known songsters feed upon these seeds. In the wild garden this plant is delightful and no mistake will be made in planting it. It is hardy and stands abuse. A poisonous member of this family (Rhus vernix) will, of course, be avoided. The fruit of this individual is white or yellowish white which makes it easy to identify.

By

CLARENCE F. WALKER

Of particular interest and value to the bird gardener is a plant not so commonly known, the Japanese Rose (Rosa multiflora). Easily grown it makes a most formidable barrier and as a dog proof hedge it is perfect. The small, white flowers, with bright yellow anthers, are very pretty although not as pretentious as its more aristocratic relative—the Hybrid Tea Rose. However, it is apparent that, with the coming of winter, birds soon learn of the simple goodness of the many seeded hips which adorn the plant in great number. Like grapes, birds will seek out the last, single fruit.

Among small trees are a host of ornamental beauties which, like shrubs, have a distinct value to our bird friends. All have an especial appeal even if they lacked fruit of any sort. To name a few—Persimmon, Mulberry, Mt. Ash, Sassafrass, Black Gum, Mackberry, Amelanchier (Juneberry), Flowering Crabapple and Holly. Most of the abbreviated list of trees and shrubs, as given, are to be found growing wild in many regions throughout the State.

Special mention must be made of the Persimmon Tree. As an all around, small tree it is supreme. Of attractive form, beautiful, clean foliage it possesses many of the important requisites of shade trees. You'll be amazed at the loads of fruits this tree produces; and further amazed at the flocks of birds of all sizes and species which make this fruit a winter's diet. Best of all, too, the fruit hangs far into the winter and is available when snow covers the earth. I have observed more than 150 song birds on a cluster of three trees—eating fruit at the same time.

Photo by Dr. A. A. Allen

Redstart feeding young.

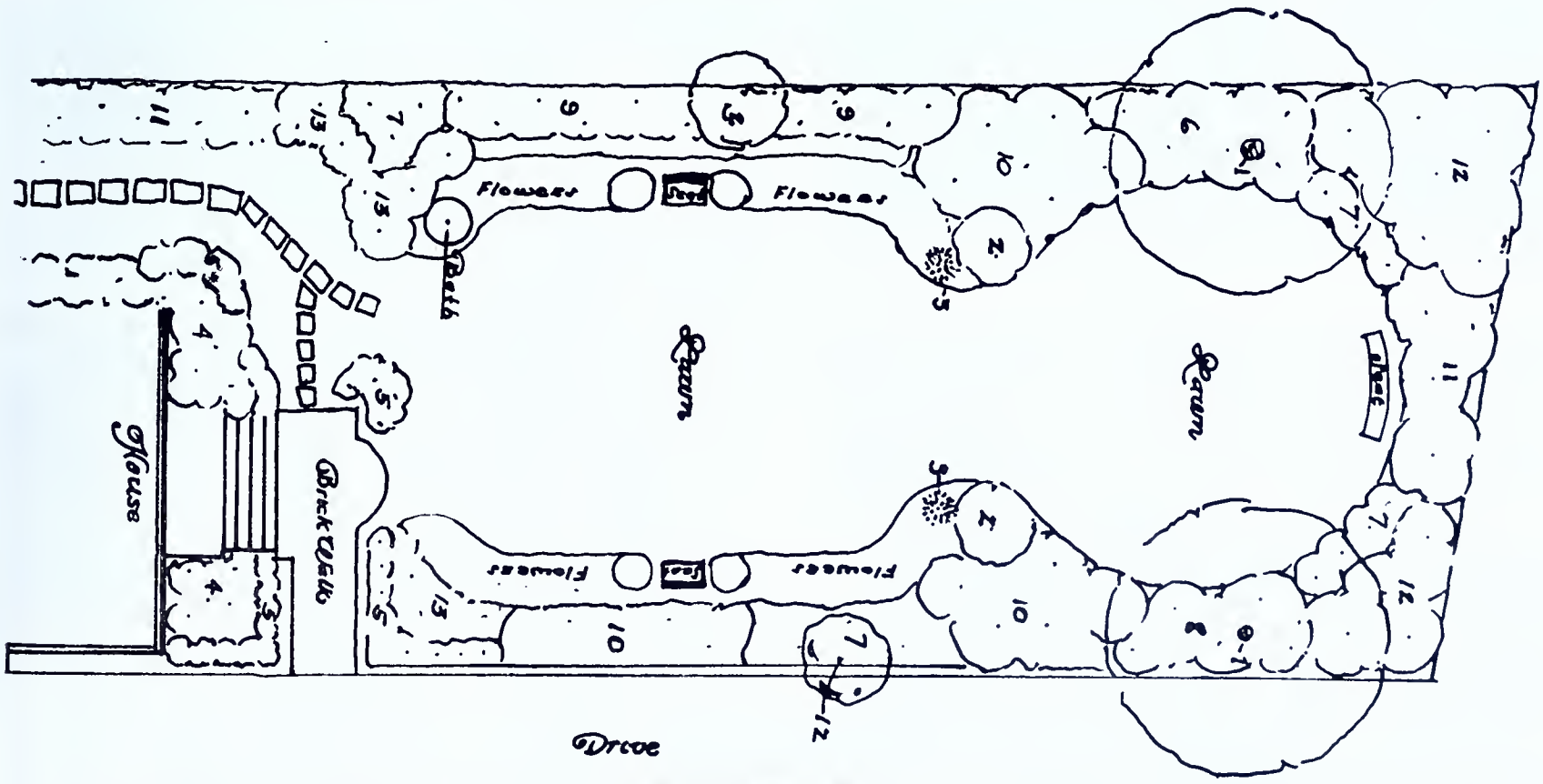
The list of food plants is imposing and certainly no attempt is now made to exhaust such inventory. If your hikes over fields and into woods is one of observation rather than one of exercise you can hardly return without having discovered something of interest and value for your bird garden.

No plant not commonly found or easily secured is used on the sketch. Ten of the thirteen species grow wild in most counties and can be transplanted quiet readily. It will be noted that no summer food plants are included but this may be altered to include such plants as cherries, mulberries, etc.

The accompanying sketch may be helpful in portraying how food plants might be used in home plantings. The plan is suggestive only and could be endlessly changed to meet varying lot and space conditions as well as personal temperments.

Believing that some will demand space for flowers, generous areas are given for these plants. In addition to the spaces marked, additional annual and perennial flower plants may be used througnout the shrub borders.

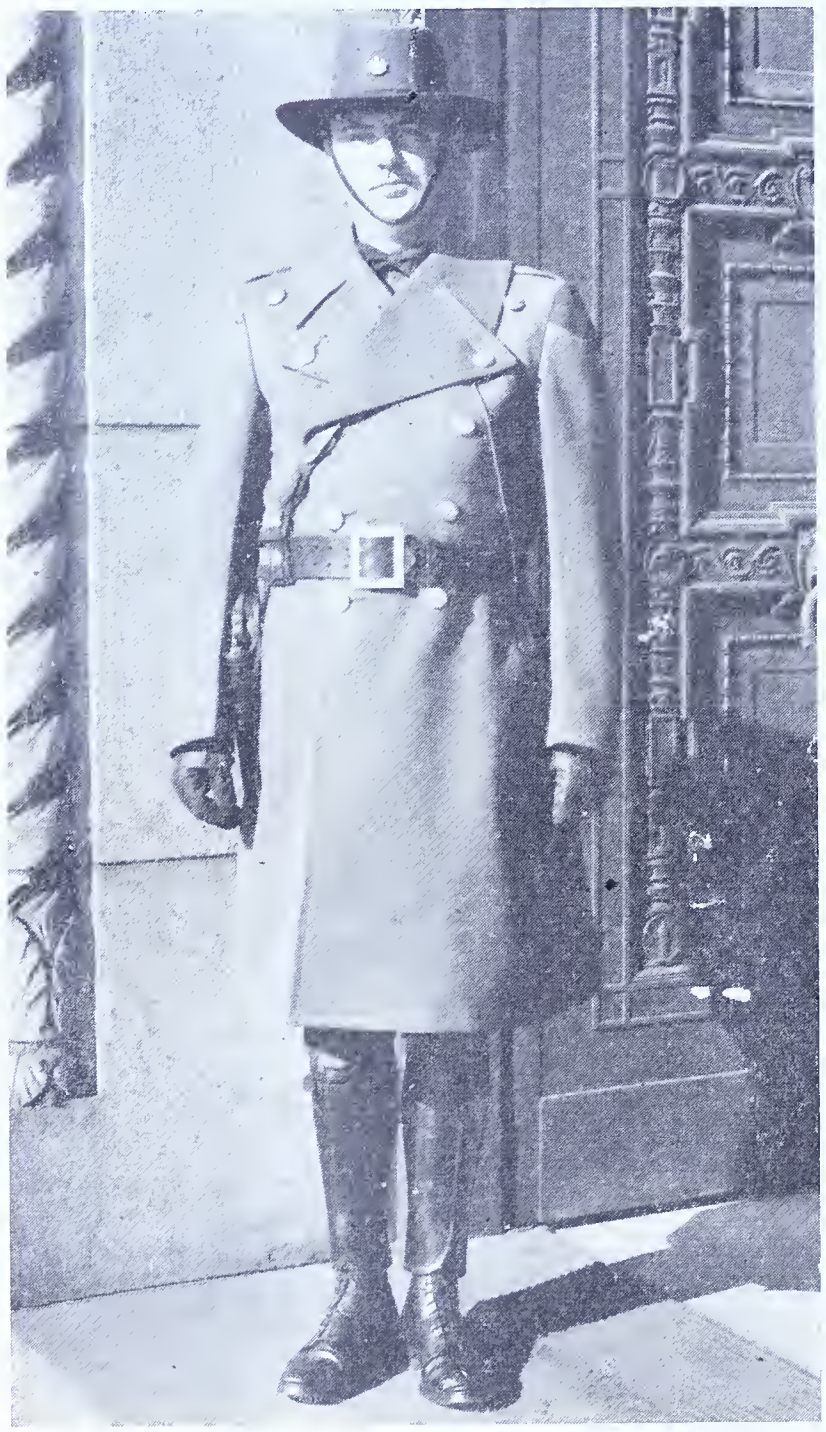
Here, then, is a fine opportunity to give vent to your artistic temperament, enhance the good appearance and value of your property while giving bits of sugar to your songster friends. They'll thank you over and over again and again.



Key to a suggested planting plan.
1. Common Persimmon. 2. Flowering Crabapple. 3. Juniper vir. (Red Cedar). 4. Spicebush. 5. Barberry. 6. Sumac. 7. Japanese Rose. 8. Common Elderberry. 9. Arrowwood (Virburnum den.) 10. Flowering Dogwood. 11. Black Hawk (Virburnum prunifolium). 12. Hawthorn. 13. Wild Rose or Wichuriana Rose.

THE SPORTSMAN'S BEST FRIEND

Reprinted Courtesy Field and Stream, December, 1940



EVERY normal man has some kind of job. Even if he is very rich and has no need to do ordinary work, yet the wary care of his money is a task in itself. Of all the jobs known to me, one seems to rank above all others in difficulty and thanklessness. It is likewise work which entails hardship and considerable personal danger. And the holder of it, as things are now in many localities, often suffers from wholly underserved unpopularity. The man I mean is the game warden. And if he is the right kind, he is the sportsman's best friend. If he is really worthy of his important office, he should be recognized everywhere for what he truly is.

In the first place, if we had no game laws, we would very soon have no game—even rabbits would be as scarce as dodos. These are wise and necessary laws. Such regulations are usually drawn up each year by state game commissions with the sanction of the state legislatures. In other words, the people, through their duly accredited representatives, make the laws.

There are also Federal regulations for migrating wildfowl. It seems understood that a state owns the game in it if it stays there; but if it migrates in season, the Government owns it. And when it passes from one country to another, the two governments concerned try to come to an amicable agreement concerning regulations touching this game.

In all this there is nothing high-handed. It is decent and regular. The average man in America is left more free to hunt than is any other civilized man on the face of the globe. It is a sport that is enjoyed in varying degrees by rich and poor. It is in our free country truly a people's sport. And our people have made laws regulating that sport in order to perpetuate it.

As is proper, these laws vary in practically all the states. Local conditions determine their exact nature. Every state has its own game laws printed for each season, and every buyer of a hunting license is supplied with a copy. Moreover, complete seasons, bag limits and other pertinent matters are given wide publicity by newspapers and by sporting magazines. Any honest man who is a hunter would have a hard time not knowing the law.

But human nature is such that whenever we make a law, even though we ourselves make it, we have to hire some one to enforce it. This is true of practically all laws, and is especially so of game laws. In some states the governor has the power of appointing game wardens; in others, the power is delegated to the chief game warden. Sometimes organizations of sportsmen make recommendations of the men they wish appointed.

It makes little difference how such a man gets his position. When once he is sworn in, he immediately becomes a representative of the majesty of the law. He represents the people's will. And he is the best friend of the true sportsman, the law-abiding hunter. Just as the policeman and the highway patrolman protect our lives and property from thieves and other scoundrels, so the game warden protects our game, and in so doing protects our hunting. If it were not for him, all of us who love this hardy recreation might just as well hang our guns on the wall.

By day and night, in all kinds of weather, amid the lonely dangers of the wilderness, it is the warden's chief business to hunt down the violators of the people's laws. His work is full of real hardships, sometimes of great peril, of almost constant dealing with the kind of people that we like to avoid. We owe him a debt of gratitude that is unpaid. In a genuine sense, the whole outdoor sporting fraternity is dependent on him for its sport.

He is the active and accommodating friend of the hunter who makes it his business to do the right thing; and in dealing with the hunter who breaks the law, the game warden is never his enemy. He is only a just and fearless man doing his duty. I have rarely met a game warden who did not make me feel that he was holding down the hardest kind of job, and doing so like a man.

"Why, yes," you may agree, "these are good guys, but what are we supposed to do about it?"

The first thing to do, of course, is to obey the law, so that the warden can put you completely out of his mind as a violator. This is the primary way to cooperate with him. This in itself upholds his hands. I also believe that we should cease to regard him as just another man with a job. As a matter of fact, he is working for us.

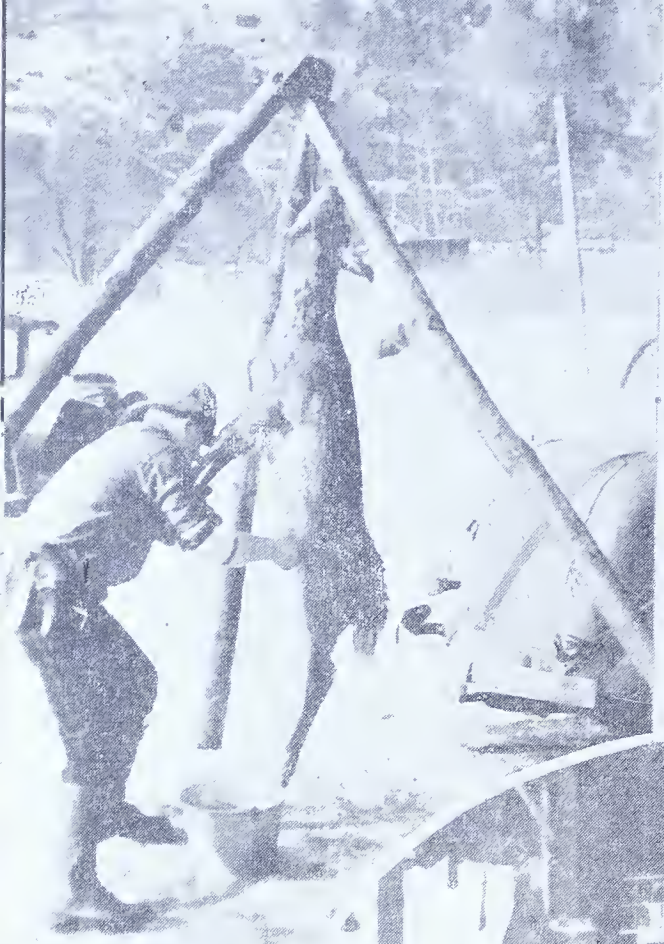
He holds what should be considered one of the most honored, and certainly one of the most vital, positions in any community. He guards what we hold dear; he is the sleepless sentinel of our sport. Everything that he does is for our good. And not only does he put the fear of God into lawbreakers, but he studies the needs of game, he feeds it, he rescues it in time of drought, flood and blizzard. Throughout the year he is our game's best friend as well as ours.

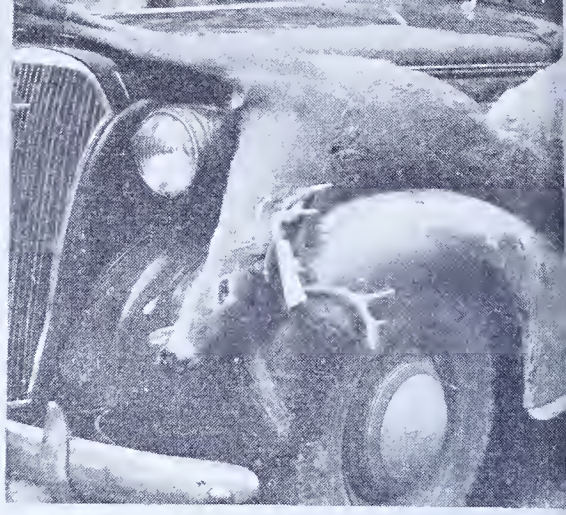
I know that there are some rascally game wardens. With such men, the duty of good sportsmen is to see that they lose office. As in any field, there are trimmers and those who play to their favorites. But the vast majority of these men are altogether worthy of their positions.

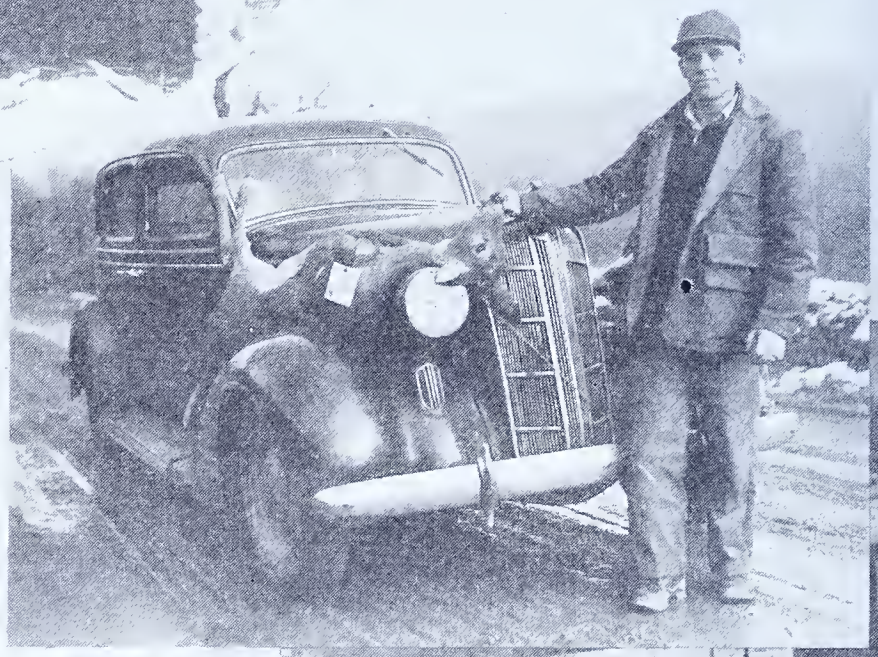
Some of my happiest associates have been with game wardens. Most of them are deeply read in wood lore. In administering the law they are stern and unwavering, as they should be, for they are trusted public servants. Yet many hunters hate to see a warden. If they are honest, he is their best friend. And if he is a real one, he merits the highest degree of respect and friendship from the sporesmen.

ARCHIBALD RUTLEDGE

1940 Deer Season Snapshots







GOVERNOR JAMES APPOINTS TWO NEW COMMISSIONERS

HON. O. BEN GIPPLE

That Governor Arthur H. James made a wise choice in his appointment of the two new members of the Game Commission is evidenced by the wide experience both of these gentlemen have had, not only in the field of conservation but in a diversity of business and professional fields.

Commissioner O. Ben Gipple, for instance, has had a very excellent forestry background, having graduated from State College Forestry School in 1915. Such knowledge naturally will make him invaluable to the Commission in view of its large land holdings.

Before the World War, in which he served, Commissioner Gipple was employed by the Wheeler-Dusenberry Lumber Company in various capacities. He is also an experienced land engineer and surveyed considerable areas in the northern part of the Commonwealth. Even in those early days he and his forest associates were broadminded enough to appreciate the relation of game and proper forest management, and carried on in a small way programs of improvement cuttings, etc., which are being undertaken on a much larger scale today.

Although he is familiar with and interested in all phases of conservation, his particular interests are in land management and conservation education. He was instrumental in promoting and is manager of the Wildlife Syndicate, which has prepared and distributed the fine educational sketches of birds and mammals from the gifted pen of that nationally known wildlife artist, Earl Poole of the Reading Public Museum. These illustrations have appeared from time to time in GAME NEWS.

In his professional and business experience, Commissioner Gipple has to his credit eight years in the finance investment business, several years of public relations work, and six years of newspaper experience. He has been active in various sportsmen's clubs for some years, and in the State Federation has served on numerous committees. At the time of his appointment he was Chairman of the Southern Division of the Federation.

The training and experience of Commissioner G. I. Phillips of Alexandria, mostly in engineering and business fields, will be tremendously valuable to the Commission. Not only has Commissioner Phillips spent most of his life as a hunter and fisherman; he has been an ardent conservationist, and has long taken a keen interest in sportsmen's affairs. Proof of this is evidenced by his membership in the Harry's Valley Rod & Gun Club since 1908, and his affiliation with the Huntingdon County Game, Fish and Forestry Association ever since its organization.

Commissioner Phillips graduated from Mercersburg Academy in 1900, and from Princeton University in 1904. He was construction engineer for the Westinghouse Electric and Manufacturing Company for five years; Superintendent of the Pittsburgh-Butler Street Railway for three years; and District Superintendent of the West Penn Power Company of Sewickley for four years. He also pursued farming and other interests, and has been owner and operator of a dairy farm since 1917.

Always endeavoring to pass on to younger generations the things so dear to his heart, he has long worked diligently with the Boy and Girl Scouts, and was President of the Juniata Valley Council of the Boy Scouts for three years. He has also been Chairman of the Buildings & Grounds Committee of the Barree Girl Scout Association since 1936.

HON. G. I. PHILLIPS

In his home town of Alexandria he has held the position of Treasurer and General Manager of the Basalt Trap Rock Company, the Alexandria Fire Clay Company, and the Alexandria Water Company for a considerable number of years. He also was Treasurer and Trustee of the Public Library and School Director and Treasurer of the Alexandria-Porter Township Joint School Board, both for fourteen years.

Mr. Gipple's appointment is the third from the Harrisburg area. His two predecessors, the late James H. Worden and William B. McCaleb, who is still living and very actively interested in the work of the Commission, together served the sportsmen of Pennsylvania for a total of 27 years. Mr. Worden's service began with the appointment of the original Commission in November, 1896. He continued until November 1910, a total of 14 years, being succeeded by Mr. McCaleb in February 1911, who served until March 1924, or 13 years. Mr. McCaleb was a vice-president of the Commission for several years during the period when Honorable John M. Phillips of Pittsburgh was the President.

Commissioner Phillips is the first of the 45 sportsmen who have served on the Commission since it was organized 44 years ago to come from Huntingdon County.

CURRENT TOPICS

One of the many Whistling Swans shot mistakenly for geese by Somerset County hounters during the past season. It was a costly mistake.

1940 HUNTING BAG SATISFACTORY

Commission Awaiting Game-kill Reports

Pennsylvania nimrods especially deer and bear hunters did quite well during the past season according to preliminary field reports. However, final figures tabulated from hunter's game-kill reports, which are due now, will give a true picture of the season's success.

Just what the effect of the deer kill will be cannot be ascertained as yet. Indications are that the total number bagged will establish a new high record, also that hunters generally seem to have complied with the Commission's request to hunt in over-populated areas, particularly around farms adjacent to the mountains where deer have caused so much damage. The previous high record was 171,662 in 1938.

That the deer in many sections were thinned out goes without saying, and the Commission appreciates the cooperation it received from the hunters. Observations will be made throughout the winter and early spring to determine what effect the season had on the herd in general, and subsequent reports of these findings will be announced later.

Bear hunters also had an excellent season, although the fact that the animals were widely scattered in search of food probably means a slightly lower kill than last year, when 535 were recorded. Game Protectors reported more bear hunters afield than they ever saw before.

Photo by Earl Smith

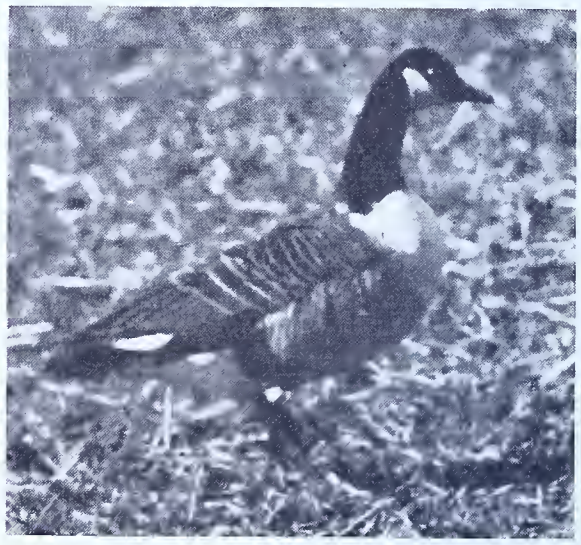
Carcass of bear killed illegally during past deer season on Game Lands No. 28. The hide was removed and stolen, and the carcass left to waste.

Wildlife Week has been set for April 14, 1941, and the Commission urges every sportsmen's organization in the State to lay plans to make it a greater event than it has been in past years.

Reports of small game hunting, especially in the early part of the season, left the Commission about equally as confused as were many hunters. However, in view of bad hunting weather at the beginning of the season, and the more limited time hunters could spend afield due to working conditions, small game hunters on the whole fared pretty well. The bad breeding season cut down the game supply, but early estimates show that most species, with the exception of rabbits, pheasants, and wild turkeys, were more abundant than during the previous year. Rabbits showed up unusually scarce in many sections; in other areas they were quite abundant. Squirrels, grouse and waterfowl were more plentiful; woodcock much scarcer.

Only one thing, as usual, tended to mar the seasons, both large and small. Hunting accidents, both fatal and nonfatal, occurred despite repeated warnings of the Commission to be careful while afield. On the basis of data so far available, the most pleasing aspect of the situation is the fact that big game hunters gave a much better account of themselves this year than last, notwithstanding the fact that probably three times as many deer were killed. Nevertheless, 18 persons apparently lost their lives by gunfire during the regular big season as compared with 22 last season. During 1931, when a similar statewide open season on bucks and does was declared, 37 persons were killed. That figure considerably dwarfs the mortality rate during the past season which, it must be admitted, speaks very well for big game hunters. Obviously they are beginning to exercise more caution. Another way of looking at the picture and to prove that hunting is not nearly as dangerous as it would appear from these figures; is to compare the mortality during the twelve day big game season with the 24 persons who lost their lives in Pennsylvania **over the Christmas Holidays alone** by automobiles. In the case of small game hunting accidents, regrettably, the mortality this year exceeded that of last; 25 fatal accidents occurred this season as against 22 last season.

There is absolutely no excuse whatever for so much carelessness, and unless hunters of the Commonwealth take heed of the Commission's safety warnings, the time may come when still more drastic legislation will have to be enacted in an effort to eliminte carelessness. It appears obvious that the big game hunters **have** taken heed of these repeated warnings, and the Commission hopes the small game fellows will follow their example next season.



There was no excuse for mistaking a swan for this, the Canada Goose.

WILDLIFE CONFERENCE

The Sixth National American Wildlife Conference will be held this year in Memphis, Tennessee, February 17, 18 and 19, with headquarters at the Peabody Hotel. Details of the program are being worked out by the American Wildlife Institute, the National Wildlife Federation, both of which organizations are sponsoring the conference.

The three-day get-together will consist of two types of meetings—the general sessions and technical sessions. At the general sessions questions of fundamental interest in conservation will be discussed by leading authorities. At the technical sessions the results on scientific investigation into specific problems, many of them developed at the general sessions, will be disclosed by outstanding technical workers. There will be many related meetings held in conjunction with the Conference as well as the annual dinner of the American Wildlife Institute and other features.

"I estimate there were about 79 deer killed on S. G. L. 159 during the past season, and there are plenty left.—Joseph L. Budd.

Another bear, a 250 pounder, killed illegally during the deer season in Elk County.

CURRENT TOPICS

AFTERMATH OF THE SEASON

By The Editor

Another large game season is over, and Pennsylvania's great army of big game hunters have cleaned, oiled and put away their guns until next year. From now until then they will have plenty of opportunity to reminisce—to live their many experiences over again. There will be the usual tall stories in barber shops and country crossroads stores. Co-workers will be driven insane by the incessant chatter of lucky nimrods who brought down their first big game trophy, or by the unlucky individual who will never get done telling about the size of the one he missed.

Only one dirty smudge tends to spoil the picture, as I view it in retrospect—disregard for the law and for the rules of sportsmanship on the part of far too many hunters. More than one hunter killed or attempted to kill a second deer. One man was caught with two extra large game tags from previous years, his idea being to kill as many deer as he had tags and take his chances on slipping them through the Commission's checking stations. A few were caught selling deer. Some few violated an old and respected law by deliberately hunting within State Game Refuges. A great many were apprehended carrying loaded guns in their automobiles. Numerous other violations occurred, many of them deliberate attempts to "beat the law."

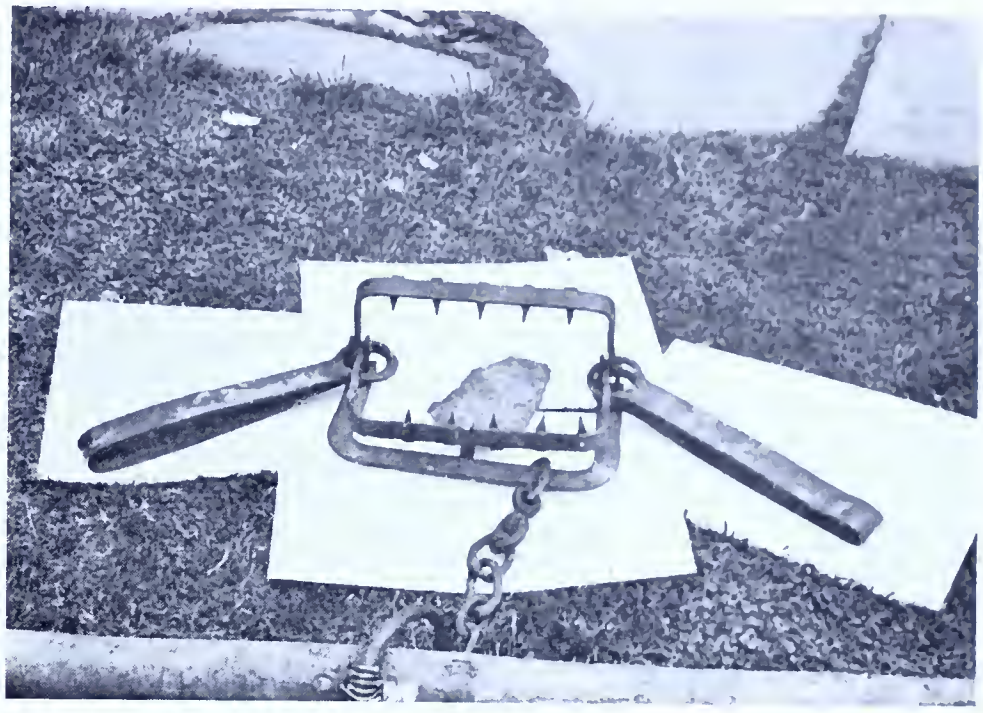
On the whole the general morale was very good, however, and the influence of organizations in promoting good sportsmanship among their members is being felt more and more every year. Landowners are beginning to notice the increased respect in which they and their rights are being held, and more and more farmers are being taken into organizations as honorary members. This all makes for better sportsmanship and good fellowship.

Some hunters bewailed their luck, bawled out the Commission, and said they never saw game as scarce as it was; many others boasted good bags. Until all game-kill reports are tabulated we will not know how the season compared with that of 1939. Rabbits appeared scarce in certain sections in the early part of the season, as did other species, but began showing up better toward the end of the season.

Fewer hunters were afield at one time due to working conditions, but Saturdays and holidays saw them out in force. More fellows hunted bears than ever before, and the deer hunters as usual were out in full strength.

One of the highlights of the picture was the reduction in the number of accidents. It looks very much as though the Commission's determined campaigns to make hunters more safety conscious are at last beginning to have their effect. The institution of "safety committees" in sportsmen's clubs, as advocated by President Ross L. Leffler, should do much toward still further increasing safety consciousness.

I almost forgot, but a number of Robin Hoods "brought home the bacon" during the deer season. Just how many we do not know yet, but there were at least three to my personal knowledge. I am waiting for a complete report from Clayton B. Shank, Secretary of the State Archery Association. Congratulations to the lucky bow benders!



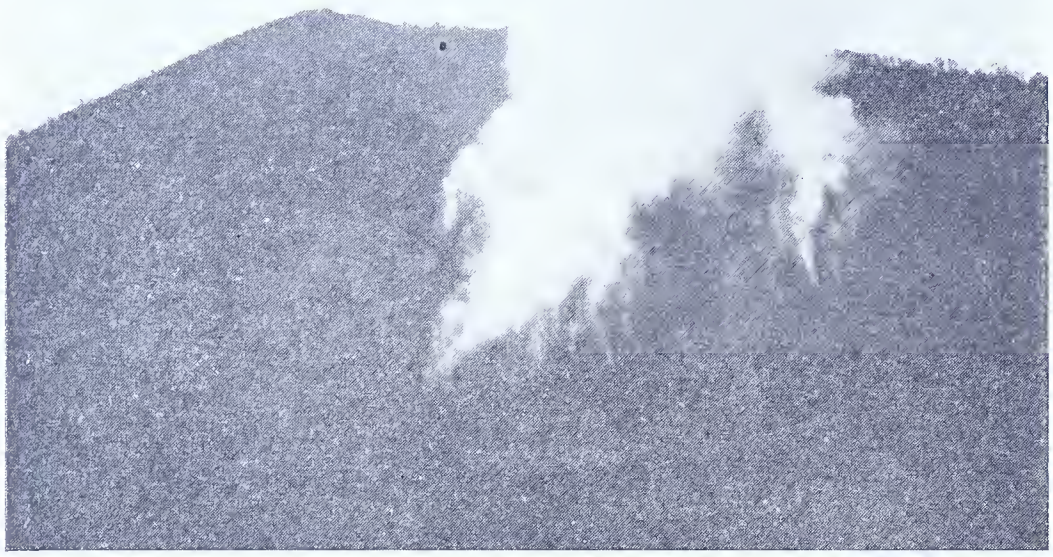
Powerful bear trap confiscated from a Hughesville, R. D. 1 resident some months ago. He was observed by Game Protectors Jesse C. Newcomer and Frank Crosby setting the illegal device in a path about supper time one evening. The following day he was arrested for using a steel trap to take a bear in closed season. He paid $100.00 fine. He had taken a bear in this same trap a few days before, and the officers confiscated seven quarts of bear meat. A trap like this would not only break a man's leg, but probably sever it.

Ben East, well known outdoor writer for the Grand Rapids Press, Grand Rapids, Michigan, claims that the moose on Isle Royale, once a great herd, are decidedly scarce on the big island today and that there is little reason to believe that the animals, cut down by winter hunger five or six years ago, have as yet made any substantial progress along the road to recovery.

The Fish and Wildlife Service recently announced two new appointments in Region No. 5, including the New England States, New York, Pennsylvania, New Jersey, Delaware, Maryland, District of Columbia, Virginia, West Virginia, and Ohio. S. Barry Locke, Regional Director, reports the appointment of Dr. Floyd B. Chapman, formerly with the Ohio Division of Conservation, as Regional Inspector for State Aid Activities and Mr. George Tompkins, who has had long experience in enforcement activities in the Bureau of Biological Survey, as Assistant Regional Director.

Large bear killed on Cameron-Elk County line November 18 by John S. Marvin, Mansfield, Pa. Standing left to right, B. M. Stover, State College, and V. H. Hurd, Millerton; sitting, left to right, E. Z. Campbell, Bellefonte, and J. S. Marvin, Mansfield. All are Health Department Employees.

CURRENT TOPICS



This reminder that the fire season will soon be here comes from W. J. Kitchen, North Bend. He snapped the picture soon after the fire was started by cparks from a passing locomotive. The fire was quickly gotten under control by CCC boys.

"The Pymatuning area is fast becoming 'deer country.' During the first three days of the deer season 19 deer were reported killed in the vicinity. One, an eleven-point buck, dressed 174 pounds. The small game hunters are well pleased with the open deer season in this area."—Game Protector Burt L. Oudette, Crawford County.

"A 210 pound buck (official weight hog-dressed) having 29 points was taken near Penn Run, Indiana County. While a spotted fawn, weight about 25 pounds, was found by Officer Shuler in Somerset County."—Wm. C. Ryder, Game Technician.

Photo by Earl Smith

Here is an otter which was caught along the Clarion River close to Portland Mills, Elk County.

MAJOR JAMES BROWN GOES TO LOUISIANA

The recently reorganized Conservation Department of Louisiana under its new Governor Sam Houston Jones will be divided into three sub-divisoins. The old Conservation Commission had fish and game, forest, parks, minerals, shell fish and other salt water life operating under one agency. The new set-up provides for a division for fish, game and fur resources. Major James A. Brown, President of the American Fisheries Society, former President of the International Association of Fish, Game and Conservation Officials, at one time head of the Fish and Game Department of Vermont and at the present time holding a similar position in Kentucky, has been selected to be in charge of this newly created division of the Conservation Department.

To Major Brown will go the distinction so far as we are able to check records of one man having headed the Fish and Game Departments of three different States. To those who attend the annual meetings of the conservation officials Major Brown is well-known. He is an able executive and leader in the conservation field. He has a delightful personality and will fit into the Louisiana picture just as though he were born and bred there.

"A local trapper brought 81 foxes to me for affidavit for bounty. These foxes were trapped in one month's time in Warren, Forest, and eastern Crawford County. Besides the foxes the trapper caught 6 minks, 6 raccoons, and 40 skunks."—Game Protector Raymond M. Sickles, Crawford County.

"A buck taken near Yatesboro, Armstrong County, was still 'in the velvet' while a buck checked in Ligonier had shed his antlers."—Wm. C. Ryder, Game Technician.

During the small game season M. C. White, an Altoona baker, shot and, so he supposed, killed a ringneck pheasant. Taking it home he placed it in the refrigerator before cleaning; about an hour later he opened the refrigerator door and out walked the pheasant. Mr. White believes his shot only stunned the bird and the cool temperature of the refrigerator revived it.

Thomas Heller, bus driver for the Greyhound Bus Company, thought he had a deer, but he didnt. His bus struck a deer, so with the aid of passengers he loaded the carcass into the baggage compartment and drove on into town. When the compartment was opened the deer was found to be very much alive, so Heller hastily closed it and drove back to the scene of the accident and released it.

"I saw a number of buck deer that were killed the latter part of the season that had lost their antlers. I talked to a hunter that told me he saw a flock of 19 ruffed grouse near Possum Brook. He said they had holes in the snow and seemed to be eating from the ferns and other green plants at the bottom of the holes."—E. J. Turner, Game Protector, Wyoming County.

Sara Derr of Academy of Natural Sciences holds deer vertebra with steel arrowhead imbedded.

I'd like to know the big game archer who used a steel arrowhead No. 2182320.

He shot a buck a year ago and the arrowhead lodged in the vertebra without killing the deer.

This animal recovered and thrived, travelling through the woods without any apparent discomfort.

That is, until the opening of the deer season this year. Then Louis H. Kimmerle, 2127 North Broad Street, Philadelphia, who was hunting in Pike County, shot an eight-point buck.

When it was skinned the steel arrowhead was found in the backbone.

Kimmerle took the piece of vertebra and the steel point to the Academy of Natural Sciences where Prof. Frederick A. Ulmer has put it on exhibition as an unusual relic of modern hunting.—Bob Vale, in the Philadelphia Daily News.

CURRENT TOPICS

"On Saturday, March 16, I joined the Espyville Sportsmen's Club on a fox drive. About one mile west of the Refuge two members of this party found a female fox and brought the body to me. Being interested in knowing whether she was the mother of young, I examined the reproductive organs and found five unborn young that were well enough developed to have been born. I asked to be taken to the spot where the fox had been found and there we located parts of eight rabbits, a duck, and part of a chicken, all lying near the fox. Two of the rabbits were wholly intact, but there were only the hindquarters of the other six. There was no den near and the fox was lying under a hemlock tree. It was evident that it had been dead for three or four days, yet there were tracks in the snow that had been made the night before.

"After thinking this unusual occurrence over, I came to the conclusion that the female fox had died from an unknown cause, probably from trouble derived from pregnancy, the male fox, thinking that the blessed event had happened, was doing his duty as a papa and brought the food in to his mate and left it by her side. His devotion even went further than that, for that day a fox was routed about 250 yards from the dead animal. In all possibility it was the male."—Game Protector Raymond M. Sickles, Crawford County.

Sportsmen hunting in the vicinity of Richmond Furnace were startled to see a large red and white sign posted on a hollow tree. In red letters it warned, "Beware, do not shoot, hunter inside." A deer hunter had taken refuge from the cold by crawling inside a hollow tree.

"I was called out to get one of the nicest deer I have ever seen. It was a big eight-point buck which had been hit by a car. The deer tipped the scales, by actual weight, at 215 pounds."—Game Protector Fuller Coffin, Erie County.

Photo by R. H. McKissick

This half wild house cat killed on State Game Lands in Westmoreland County, weighed 16¾ pounds.

"'Dickie', the tame buck kept at the Refuge Headquarters of No. 505 for about eleven years, was shot twice in the neck by unthinking hunters and from latest reports was still living. This buck has been kept in a wire enclosure as a tourist attraction since a fawn. One of the shots went through the barn." (Editor's Note: Later reports indicate that "Dick" is coming around in fine shape and is expected to recover.)—Wm. C. Ryder, Game Technician.

"Deputy Sheldon and I finished killing a doe deer with antlers in the velvet. One antler was a spike and the other a two point."—Raymond Sickles, Game Protector, Crawford County.

"A hunter shot a doe deer, in the McHenry Township, that had a fully developed fawn in it. The fawn was dead and was about all bone."—Chester Siegel, Game Protector, Lycoming County.

"There is an unusually large deer kill in this section, with about 40% being legal bucks."—Roland Turley, Game Protector, Bedford County.

Says Mr. Sharpless Holden, Sec. and Treas. West Chester Rifle and Pistol Club: "I am sending a couple of pictures of a common water Moccasin with 16 young ones inside of it. The one picture shows a young one crawling out of a bullet hole, and a sack containing another. The other shot shows all sixteen on a basket lid that was handy. Killed this snake October 6, while fishing on the Brandywine Creek about three miles from West Chester."

"Over 25 deer have been killed in the Pymatuning area so far this season. Several extra fine bucks, the largest head had 42 points, and the spread measured 32 inches."—Burt Oudette, Game Protector, Crawford County.

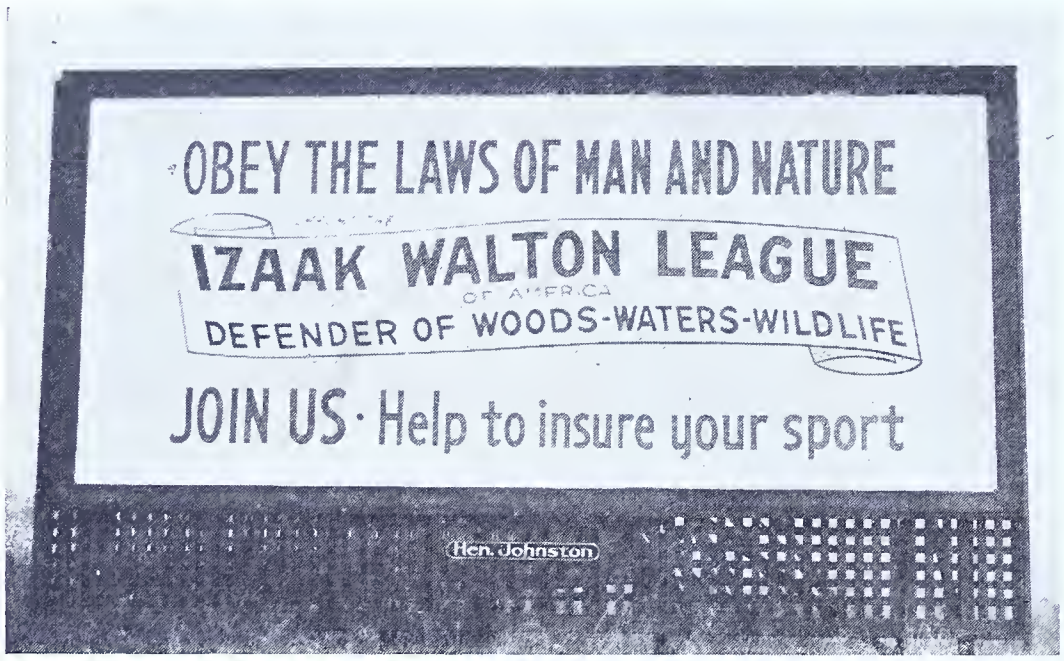
"We have had some of the most thoughtless hunters in this section during the big game season that I have ever seen in the woods. The first day of deer season at Refuge No. 24, in the Big Beaver section, some hunters used the posts the refuge wire was tacked on, and the wood back boards for posters, as firewood. There were several hundred feet of wire down and approximately 12 posts which had been used for firewood."—Edward Shaw, Game Protector, Clarion County.

"I got one report of an all albino deer being shot in Tyrone Township. I saw a six point buck that was shot in Jackson Township, which had 4 white legs and part of its sides were white. I also saw one that had been shot which was red and white spotted."—Harold Russell, Game Protector, Perry County.

"One young hunter apparently went out before daylight one morning and saw two shining eyes, at which he fired. When he went to claim his kill he discovered that he had shot a neighbor's mother hog that had 9 little piggies."—Harold Russell, Game Protector, Perry County.

"The first day I checked 52 deer, 26 male and 26 female. The best part of the season was that not one single man was wounded in this section, and I had only two spike bucks shot."—D. H. Franklin, Game Protector, Franklin County.

"I believe the most notable feature of the present deer season to be the fact that I have yet to find a spike buck killed illegally." (Editor's Note: A great many of the field employes have reported that very few spike bucks were shot illegally.)—L. B. Rosenkrans, Game Protector, Elk County.



In a desire to cooperate in a conservation education program Mr. Johnston, billboard advertiser, contribnted this space to the Berks County Chapter of the Izaak Walton League.

The Carlisle Fish and Game Association announces the completion of arrangements for a Junior Conservation Program.

This program is being carried out and administered by local Boy Scout troops, the Fish and Game Association acting as sponsor and advisor. A certain amount of financial aid is also given by the association.

The program covers all phases of conservation and the extent of the work in each classification shall be determined by the scouts and their masters. Each troop has its own territory in Cumberland County and will be left to develop it in any manner that it sees fit. The program is so arranged that activities will continue the year round with appropriate work for each season.

Considerable interest has been shown by these junior groups and it is hoped that a permanent junior program can be developed that will become an integral part of Cumberland County's wildlife program.

Work has already been started by some groups, and an interesting and educational winter is in store for them.

Much credit is due the Scout Masters, their assistants, and the local game protector, Joseph Foreman. Their effort and interest make this program possible.—W. E. Paller, Chairman of the Junior Conservation Committee.

The Crawford County branch of Division F, Pennsylvania Sportsmen's Council just completed a very successful year with 145 loyal sportsmen and farmers.

The club sponsored a farm game management program of approximately 2000 acres. The great majority of the cooperating farmers were very well satisfied with their share of the bargain, and there was a decided improvement in the behavior of the general run of sportsmen who enjoyed the hospitality of the participating farmers.

Under the ardent and economical leadership of its three-term President, Irvin B. Stanford, the Chapter cleaned up over one hundred dollars of old debts. In addition the association, under its Director, Ira H. Lewis, and with liberal contributions from local sportsmen, constructed a $75.00 pen on Game Lands 85 in Rockdale Township for holding ringnecks. Out of the 130 chicks, 112 reached maturity. All birds were liberated locally and local hunters, on the whole, had very fine shooting. The left over breeding stock was very gratifying, and a winter feeding plan is already under way to carry it through.

Mr. George J. Melvin, Editor of the Claysville Pennsylvania Recorder, submitted the following interesting account of a rather unusual shot made by a local hunter during the past small game season. The fortunate nimrod, Earl B. MacCartney, after hunting about twenty minutes, observed two squirrels, nose to nose, on a short limb of a red oak tree. He pulled his gun up and was sighting it when a third squirrel came down right where the first two were nosing. MacCartney made the most of the opportunity by pulling the trigger. He expected to get one of the squirrels at least, but he killed two and the third which he quickly dispatched.

The Tarentum High School Sportsmen's Club has been carrying on a very worthwhile conservation project during the past two years. In the one project over 800 predators were killed. A thousand black locust trees were planted under another, and a thousand evergreens and a thousand red oaks under another.

In an item submitted to the Halifax (Pa.) Gazette by L. N. Steffen, one Peter D. Nordun of Elkton, Virginia, cites the unusual experience of chancing upon an old gray horse near an abandoned homestead in the vicinity of the beautiful Shenandoah National Park. As he approached the animal, his attention was drawn to a clump of sumac in which he heard a peculiar noise. To his surprise, a fawn deer came bounding from within the thicket and playfully rushed up to the side of the horse. The two animals met affectionately, then both began to walk slowly away. Mr. Nordun tried to reach the fawn but it drew more closely to the horse which would not permit him to venture closely. Mr. Nordun made several clever camera shots of the friendly pair.

The Apollo Community Sportsmen's Organization, Apollo, Pennsylvania, is doing a splendid job of interesting local farmers and landowners in their conservation programs. Over three hundred tillers of the soil are members of the club, which agrees to take in any farmers and landowners who wish to join, at no cost. Previous to the hunting season over two thousand posters were distributed, encouraging hunters to first ask permission before going on the property.

Photo by Robert Latimer

LaRue McCarty, Forksville, with female albino raccoon caught near Proctor along the Lycoming-Sullivan County line. It had pink eyes.

WITH THE CLUBS

Meet two lucky nimrods. Mr. and Mrs. Phillip Harris, West Pittston. Each bagged a wild turkey in Union County on November 2.

FINE COOPERATION

At the conclusion of the past hunting season, the Palmerton Rod and Gun Club sent out 653 post card announcements to each of its members urging them to send in their reports promptly. The club even offered to send them in for them as a special service. Congratulations Palmerton.

Over 250 enthusiastic dog lovers were present at the Valley Forge Field Trials, which were held on the regulated shooting grounds at Fort Washington, Pennsylvania, November 18 to 20 inclusive. First place in the Open All-Age Cocker Stake went to "Cinars Ring" owned by Harry I Ceaser, New York City. Second, "High Time Feller," third "Prince Chicot", and fourth "Cinar's Dash" places went to Mr. and Mrs. Wm. R. Kirkland, Brewster, New York.

In the Limit Springer Stake "Patricia of Forshalee", owned by Mrs. Ambrose F. Clark won first place, "Tedwyn's Toddy" of Strawberry Hill owned by Mr. and Mrs. F. M. Horn, won second place.

In the Open All-Age Springer "F. T. Ch. Slolo Event", owned by James Simpson, Jr., placed first. "Noranby Pelican", owned by James Simpson, Jr., won second place, "Breckenbill Brigadier", owned by James Simpson, Jr., placed third, and fourth place was taken by "Gay Flush", owned by Robert McLean.

In The Amateur Gunner-Handler Stake, "Prince Chicot", owned-handler, Mrs. William Kirkland, Jr., placed first, while second place was taken by "Hollybrook Truce", owned and handled by William Kirkland, Jr.

"Plenty of deer left. Several herds of from 5 to 20 seen last day of the season. The only place that was hunted herd was the paths. Reminded you of soldiers walking post in the army. Too many reports came to me of deer being stolen."—Herbert A. Diehl, Game Protector, Berks County.

FIFTY YEARS AGO

"A son of Daniel Gentzel, Centre Hall, while hunting on Slate Ridge, Seven Mountains range, killed a doe and a fawn with one shot.

"In 1890 hunting season C. K. Sober, Lewisburg, shot 120 pheasants (ruffed grouse).

"In Diamond Valley, Huntingdon County, during 1890 hunting season, 69 deer and two bears were killed. The bears, weighing 176 and 210 pounds, were shot by Martin Thomas, Tyrone, and McClain Lingenfelter, Union Furnace."—Sentinel, Lewistown.

REWARD!

Lost or stolen on Coudersport Pike between Dyer Farm and Oleona, December 11, 1940, a Sedgely Springfield Rifle, bolt action, Lyman 48 peep sight, Model 1903, Rifle No. 18970. Twenty ($20.00) dollars reward for return or information leading to recovery.—H. A. Heinrich, Cross Fork, Pa.

Anyone killing banded game birds are asked to return the bands to the Game Commission, or at least report the incident, giving the band number and where and when the bird was found.

Anyone who killed migratory game birds, or finding dead banded birds other than game birds should report the incident to the U. S. Fish and Wildlife Service, Washington, D. C.

DEIBLERS' DAUGHTER PROVES SHE'S EXPERT HUNTER

Former Fish Commissioner and Mrs. Oliver M. Deibler, Greensburg, don't like to brag, but they are ready and willing to pit the prowess of their daughter, Carol Ford, of Oil City, against any of them—men or women—when it comes to hunting.

Daughter Carol came back to Westmoreland County to hunt with her father when the small game season opened. The first two days of the season she bagged three ringnecks and seven rabbits, and two of the ringnecks Father Deibler had missed with his trusty gun. She bagged the ringnecks and rabbits with a .410 shotgun, which is almost like shooting a rifle.

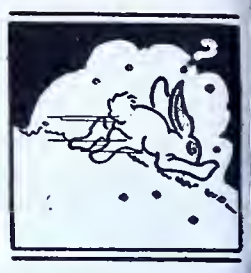
One day after the November election, she went up to Juniata County to hunt with her father and bagged a 13-pound wild turkey gobbler.

Later she went deer hunting in Forest County with her husband, John, and an expert hunter friend of her husband. They came upon a 127 pound doe early in the day, and both John Ford and his friend missed their shots. But Carol Deibler Ford brought the doe down with a shot right through the heart.

Daughter Carol, of course, feels she was lucky in hitting the deer's heart, but Daddy Deibler likes to feel that the shot only reflected some of the marksmanship and hunting training he gave her while she was growing up.

Large buck killed by Charles Robbins, on December 3 near Bear Creek, Luzerne County. Eleven points; weight 190 pounds dressed. Photo submitted by Laning Harvey, Cedar Creek.

SPORTSMEN'S QUERIES



By CHAS. F. STAMBAUGH

CROW SHOOTING ON SUNDAY

Q. Is it legal to shoot crows on Sunday in Pennsylvania?

J.K.—Port Carbon, Pa.

A. Yes, insofar as the Game Law is concerned, if the hunter possesses a proper license and displays the tag. However, any Sunday shooting may subject the hunter to prosecution under the Blue Law.

* * *

CARRYING GUN AFTER KILLING DEER

Q. After a hunter kills a deer in season, may he continue to drive deer for his party with gun in possession?

A.M.—Pittston, Pa.

A. While the Game Law permits a hunter who has killed a deer to continue hunting with his party in the manner known as driving, it forbids him from attempting in any way to kill a second deer, and if one participates in a drive after killing a deer, we **advise against** carrying a shotgun or rifle while doing so. While the present law does not definitely prohibit a hunter from carrying a gun under these conditions, the better clubs throughout the State do not condone it.

* * *

SHOWING HUNTER'S LICENSE TO PRIVATE CITIZENS

Q. Can any citizen demand to see your hunting license, even though he is not a Game Protector?

W.J.A.—Meyersdale, Pa.

A. No, this right is not given to every citizen of the State, but the law requires a hunter to show his license certificate upon demand of any owner, lessee, or any employee or representative of such owner or lessee, upon whose lands that person may be found.

* * *

GAME PROTECTORS COLLECTING FINES

Q. If a hunter breaks a Game Law while hunting, is a Game Protector allowed to collect the fine right there?

A Hunter

A. Yes. The Game Law gives Game Protectors or Deputy Game Protectors the right to accept fines without taking an offender before a magistrate, provided the accused is willing to sign an acknowledgment of guilt and pay the fine prescribed by law to the officer. Salaried Game Protectors are equipped with official registered receipts to be given to offenders in such cases, and these receipts are evidence of full satisfaction of the offense committed.

DOUBLE BARREL SHOTGUN FOR DEER HUNTING

Q. May a hunter carry two pumpkin-ball shells in a double barrel shotgun during deer season, or is a gun of that type considered an automatic?

J.Y.,Jr.—Throop, Pa.

T. There is no objection to the use of a double barrel shotgun for hunting deer or bears in season when both barrels are loaded with what are commonly known as "pumpkin ball" shells. It would be a technical violation to discharge both barrels at a big game animal at one time.

* * *

SETTING TRAPS IN HOLES FOR SKUNKS

Q. Is it legal to set traps in holes for skunks, now that they are unprotected?

H.B.K.—Uniondale, Pa.

A. No. Traps set for skunks or other animals classed as predators must be set five or more feet from holes.

* * *

USE OF 25-20 RIFLE FOR DEER HUNTING

Q. Is it lawful to hunt deer with a 25-20 Cal. center-fire, five-shot, bolt-action repeating rifle?

L.H.K.—Easton, Pa.

A. Yes. Expanding bullets must be used. However, the law forbids the use of any 22 or 25 Cal. rimfire cartridge to hunt big game.

* * *

NETTING STARLINGS PROHIBITED

Q. Is it legal to use nets to catch starlings and crows?

N.C.—Philadelphia, Pa.

A. No. The use of nets to take wild birds or wild animals of any kind in Pennsylvania is now prohibited under Section 704 (a) of the Game Law of 1937, as amended in 1939.

* * *

THE FIRST BUCK LAW

Q. In what year was the first buck law enacted?

A. 1907.

Q. In what year was the law passed forbidding the use of dogs for hunting deer and bears?

A. Deer, 1897; bears, 1935.

Q. In what year were you forbidden from hunting bear during the deer season?

J.S.M.—Milton, Pa.

A. Bears could not be hunted in deer season since 1935. However, in 1928, 1932, 1933 and 1934 it was also illegal to hunt bears in deer season.

SALE OF DEER HIDES

Q. May deer hides be sold?

C.H.—Coal Center, Pa.

A. No, it is strictly unlawful to sell the hides of deer killed in a wild state in Pennsylvania.

* * *

KEEPING OPOSSUMS

Q. How may I secure a permit for keeping an opossum which has been caught in a trap?

J.E.C.—Collegeville, Pa.

A. Since opossums are not now protected, no permit is necessary. The Game Law permits the possession alive indefinitely of fur-bearing animals legally taken in season, or predators taken legally at any time.

* * *

DISPLAY OF LICENSE BY WOODCHUCK HUNTER

Q. As a rule it is too hot to wear a coat while hunting woodchucks (groundhogs) and it is more convenient to carry one's license tag in his pocket. Must the license tag be shown on the middle of the back while hunting groundhogs, as we do in big game season?

F.G.—Johnstown, Pa.

A. Yes. The Game Law requires the hunter's license tag to be attached and displayed on the outer garment on the back between the shoulders so that the figures are plainly visible at all times while hunting. No exception is made in the case of hunting woodchucks and we are obliged to inform you that the tag must be displayed as above while hunting them, or any other wild birds or mammals in Pennsylvania.

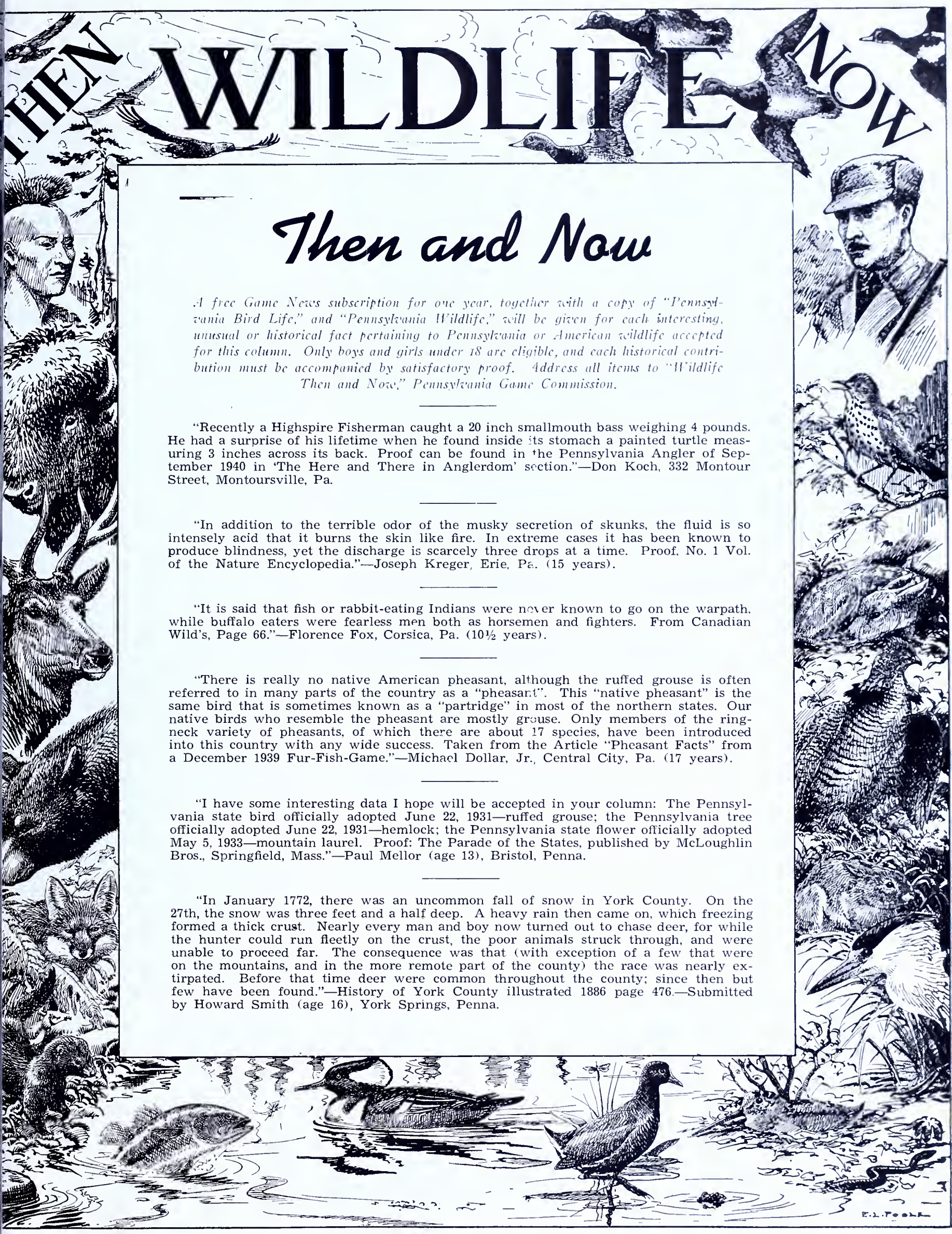
* * *

OPENING HOUR OF DEER SEASON

Q. Has the deer season in Pennsylvania always opened at 7:00 A. M.? If not, when was it changed?

C.J.D.—Schnecksville, Pa.

A. No. Prior to 1936 the deer season opened one-half hour before sunrise, and that was the first year in which the 7:00 A. M. opening was effective. In 1937 the season on male deer opened at 9:00 A. M., November 29th. However, in the following year the seven o'clock opening was restored for deer hunting, and has been in effect each year since.



Then and Now

A free Game News subscription for one year, together with a copy of "Pennsylvania Bird Life," and "Pennsylvania Wildlife," will be given for each interesting, unusual or historical fact pertaining to Pennsylvania or American wildlife accepted for this column. Only boys and girls under 18 are eligible, and each historical contribution must be accompanied by satisfactory proof. Address all items to "Wildlife Then and Now," Pennsylvania Game Commission.

"Recently a Highspire Fisherman caught a 20 inch smallmouth bass weighing 4 pounds. He had a surprise of his lifetime when he found inside its stomach a painted turtle measuring 3 inches across its back. Proof can be found in the Pennsylvania Angler of September 1940 in 'The Here and There in Anglerdom' section."—Don Koch, 332 Montour Street, Montoursville, Pa.

"In addition to the terrible odor of the musky secretion of skunks, the fluid is so intensely acid that it burns the skin like fire. In extreme cases it has been known to produce blindness, yet the discharge is scarcely three drops at a time. Proof, No. 1 Vol. of the Nature Encyclopedia."—Joseph Kreger, Erie, Pa. (15 years).

"It is said that fish or rabbit-eating Indians were never known to go on the warpath, while buffalo eaters were fearless men both as horsemen and fighters. From Canadian Wild's, Page 66."—Florence Fox, Corsica, Pa. (10½ years).

"There is really no native American pheasant, although the ruffed grouse is often referred to in many parts of the country as a "pheasant". This "native pheasant" is the same bird that is sometimes known as a "partridge" in most of the northern states. Our native birds who resemble the pheasant are mostly grouse. Only members of the ringneck variety of pheasants, of which there are about 17 species, have been introduced into this country with any wide success. Taken from the Article "Pheasant Facts" from a December 1939 Fur-Fish-Game."—Michael Dollar, Jr., Central City, Pa. (17 years).

"I have some interesting data I hope will be accepted in your column: The Pennsylvania state bird officially adopted June 22, 1931—ruffed grouse; the Pennsylvania tree officially adopted June 22, 1931—hemlock; the Pennsylvania state flower officially adopted May 5, 1933—mountain laurel. Proof: The Parade of the States, published by McLoughlin Bros., Springfield, Mass."—Paul Mellor (age 13), Bristol, Penna.

"In January 1772, there was an uncommon fall of snow in York County. On the 27th, the snow was three feet and a half deep. A heavy rain then came on, which freezing formed a thick crust. Nearly every man and boy now turned out to chase deer, for while the hunter could run fleetly on the crust, the poor animals struck through, and were unable to proceed far. The consequence was that (with exception of a few that were on the mountains, and in the more remote part of the county) the race was nearly extirpated. Before that time deer were common throughout the county; since then but few have been found."—History of York County illustrated 1886 page 476.—Submitted by Howard Smith (age 16), York Springs, Penna.

AN OLD TIMER REMINISCENCES

By JOHN MOCK

Editor's Note: This little story, as recently told to John Mock, Editor of the Outdoors Column of the Pittsburgh Press, is published in order to give our readers comparisons of conditions today with those before the Game Commission began to function.

Here's a nice buck, 9 point, 115 pounds dressed. Killed by Ray L. Myers, Fayetteville, on Coyle's Ridge south of the Lincoln Highway near Caledonia on December 19. Others in photo are center, David Showalter and Glen J Myers, also of Fayetteville.

IRA WEED lives at the mouth of Walters Run.

On the opposite side of the road, which wends its way downstream toward Westport, is the home in which he was born in 1869.

All of Ira's life has been spent along Kettle Creek.

One day last week while the gang was out trying to pick up the trail of a wounded deer, encountered during the closing hour of the previous day, we dropped in on the old timer for a little visit.

We caught him in a reminiscent mood, eager to talk of the days gone by.

His great grandfather was Jacob Hammersley, who settled down in northern Clinton County in 1824. It was his forebearer and Jacob Stewart who built the first grist mill in the upper Kettle Creek Valley, the mill being operated by the waters of Hammersley Fork.

Prior to the construction of the mill the settlers were compelled to load their grains upon the back of a horse and follow a trail down through the forest to Westport.

Ira related being told by his grandmother of how wolves would take to fighting on the hillside opposite the mouth of Hammersley Fork, where stood the Hammersley homestead. Panthers and wildcats were common, almost daily sights.

Supplies were brought into the country on two trips, the first just prior to the freeze-up, the second in the spring. The conveyance was a dug-out which was floated to Williamsport, then poled back home laden with the necessities of life.

Remember 'Pig's Ears'

Only when the lumber-jacks moved into Cross Fork did the country open up. To those who frequent the area during the present day it is almost unbelievable that in 1901 Cross Fork was a thriving community of some 3500 persons, boasting of five hotels and numerous "Pig's Ears," a term applied to the speakeasies of a later date.

Recalls Old Days

His narrative of the wildlife, however, was more interesting and is a revelation to many a hunter of the present generation.

On many occasions, when about 21, he and a pal would trudge up Walters Run to the head, cross over into Wykoff Run, then follow Trout Run to its mouth. In those days game laws were something yet to come. "Dogging" deer was a common practice. The trip would see them accompanied by two or three good deer dogs. Yet the trip was frequently made without encountering a single deer and when the mountainsides were covered with snow, many times, not a single tell-tale track was revealed upon the white blanket.

All the more amazing is that this situation existed prior to the days when the hills were lumbered, for it was not until 10 to 15 years after the operation was started at Cross Fork that the ring of the axe was heard in the Leidy district.

More Deer Than Ever

"Today," said Ira, "there are more deer in this country than there ever were back in the early years of the twentieth century. We often hunted for days before we came across a deer, yet today you've hunters in the ranks who expect to find one behind every clump of hemlock or laurel and condemn the Game Commission because they aren't present."

In Mr. Weed's younger days bear were much more numerous. He related of a relative, Miles Walter, trapping 16 bears in Walters Run during one season. Unlike deer, the bear weren't hunted for their carcasses, the pelt being the incentive. Ten to 12 dollars was big money to the backwoods folks. However, the number of trappers was small and they made little inroads upon the bear population.

Another interesting fact discussed by Ira was the presence of turkeys. He claims that back in his younger days the wild turkey was unknown and that only in recent years have they been found in his section.

"This year," he advised, "I've seen more wild turkeys than at anytime within my memory."

Fewer Grouse Now

Grouse are fewer in number. He recalled when it was possible to saunter forth with his old smoothbore — which he termed a "swivel-britch," a forerunner of the present day over-and-under—getting all the grouse needed for the table.

"We never took more than we could eat and there were always grouse to be had," he related.

Hunters, however, were few and far between. Only the natives back in the remote and isolated sections did the gunning. Ammunition was costly and not always at hand, and when it was used it usually was devoted to something which brought a greater return than the carcass of a grouse.

Two of the most deplorable situations which exist today in the big game country are the absence of food and predators, declared the old-timer.

The first, for the proper sustence of the animals; the second as a factor in eradicating the weak and the sickly.

Defends Predators

"This country would be much better off if we had a few of the wolves, panthers and the wildcats which formerly frequented these hills," he believes. "We had less deer, true, but we didn't have the runts."

Destroying the balance of nature has done much to bring grief to present day game administration. The theme of predator control has been overdone. Today it is no longer predator control, but predator extermination. The result of 'killing everything that kills what we want to kill" has brought its reward in many ways and they are nothing to be proud of.

His solution to the food problem is much the same as that advanced by many others, but for obvious reasons, is discussed only in quarters where the suggestion is in reasonable and sound minds. That the practice will someday find its way into use has been a foregone conclusion for a number of years.

Deer Season Week Away

One week from tomorrow the deer hunting army will again make its way to the haunts of the whitetails which, as far as their presence is concerned, is every one of Pennsylvania's 67 counties.

It is a strange contrast. A half century ago, when the mountainsides of the big game country were still blanked with the virgin timber, the native found a task upon their hands to bag themselves a piece of venison. Today, when civilization, good roads and the automobiles have taken over this former remote and isolated country it has been merely a matter of going out and killing a deer.

That a continuation of this status would be a welcome one cannot be disputed. Unfortunately other factors must be considered and of these that of food is probably the most important. It was most responsible in bringing back the deer and only when those same conditions are recreated can a deer herd be maintained—how is not the question. It is merely a matter of how soon those charged with the administration will have the courage to put it into effect.

Old Claims Heard Again

The coming season will bring with it the claim heard so often in the past—it will be the last of the deer herd, but like in the past it will originate primarily with the chap who insists on shooting deer without the exertion of hunting for them.

To the old timers, who have maintained established camps in the big game sections for deer hunting — not deer shooting — it means a return to the days when the woods were free of much of the element which has found its way into the deer-hunting ranks.

The deer has become the problem child of conservation and it will remain so until the deer hunter has taken a more active interest in providing a solution—and the answer lies in something more than by giving mere lip service to the cause.

Suitable environment, new blood lines and better protection cannot be had from thin air, neither can more ideal hunting conditions. The problem can be solved if the deer hunter wishes it so.

FIELD NOTES

"On November 5 I was informed by a sportsman, who is also a Justice of the Peace, that a large, tame, white rabbit had been shot on the farm of Thomas V. Dumm near Nicktown, on November 3. This farm has a large tract of very good hunting territory which has always been open to the public. I made an investigation at once, as I know one of the things the Commission requests is to respect the rights of the property owner.

"I found that two young men from Blair County had shot the tame rabbit close to the farmer's buildings. When they were dressing it, the 14 year old son of the farmer confronted them in regard to killing his tame rabbit, and was threatened with a licking from one of them. He ran for his father, but they sassed him and refused to show their lisenses (one of them was concealed). They ran, and the farmer and three young men who oppeared on the scene followed them to a cabin. The Justice also appeared at the cabin after hearing the fuss. After some argument he (the Justice) secured the license numbers which he turned over to me, I located them at Altoona and notified them to appear at my official headquarters at once or I would take legal action against them.

"The two young men accompanied by the father of one of them came to my office. After stating the facts I imposed a fine of $25.00 on one of them for shooting closer than 150 yards to the farmer's buildings. On the one who had his license concealed I imposed a fine of $20.00. They are to settle on or before November 28, and have signed acknowledgments of their guilt. They are also sending a money order of $10.00 to the farmer for damage.

I drove out on November 14, and interviewed the farmer in regards to not posting his lands, and was assured that due to the prompt services secured from the game protector in locating the culprits, the fines imposed, plus the payment of damage, he will not close his lands to hunting. He sure was very much pleased with the help from one of the Commission's officers," and later wrote me the following letter:—Game Protector W. B. McClarin, Cambria County.

"Dear Sir: This will acknowledge receipt of check in the amount of ten dollars ($10.00) for the destruction of personal property suffered by reason of 'inconsiderate hunters.'

"I want you to know that I appreciate your fine cooperation and the efficient manner in which you took care of my interest in this matter. With men of your calibre in the field looking after, not only the protection of game and the enforcement of the game law, but the interest of the property owners rights as well, there will be less restrictions placed on hunting. I refer to the posting of lands. I might add, that it is not my intention to post my land. Again thanking you, I am."—Thomas V. Dumm, Nicktown, Pa.

"On Sunday afternoon, December 15, I talked to some hunters who stated there were plenty of deer left back in the remote sections. They had three does and one nice buck, all taken on on drive that day. They stated they saw about 70 deer that day on the one drive that they took the deer on. On Saturday I was out to Refuge No. 502 and saw three nice does and a six-point buck standing in the refuge."—Clyde W. Decker, Game Protector, Clearfield County.

"Oh Boy! I smell another skunk in our next trap!"

LOOKING AHEAD

Continued from page 4

with the Pennsylvania State College and other institutions, so that she will be prepared and able to adjust herself to meet new conditions as they develop. Research is the measuring stick upon which we can draw many conclusions concerning the status of our wildlife—its food, its habits, its numbers, and the creatures which prey upon it and their numbers. We have much, very much, yet to learn about it, and the more we learn and the more we teach the boys and girls in our schools today about it the more chances we shall have of perpetuating and managing it on a satisfactory scale in the future.

The management of our natural resources, our forests, our soil and our wildlife is and shall continue to be one of the primary factors in the Commission's program of "looking ahead". Management constitutes a great problem because of its many inter-related conditions. It requires proper management of the forests, bearing in mind not only the preservation of the wild creatures which live in the forests, but the preservation of the soil which will wash away if the forests are not managed properly. The improvement of food and cover conditions on game lands will continue until each and every acre throughout the state reaches its maximum carrying capacity for wildlife in the amount of food and cover it guarantees. To have game you must have cover and food, and while the Commission through the cooperation of the sportsmen and the various federal relief agencies are now doing much toward the development and improvement of our state game lands, there is still much more, yes very much more, to be done. Such a program is not completed in a day, a week, or a year. Unless properly controlled the time will come when our deer herd will control itself, but the process will be Mother Nature's own cruel method.

Muskrat near house. The management of our natural resources shall continue to be one of the primary factors in the Commission's program.

"We have no birds!" cries the farmer, looking from his back door onto field after field of clean fence rows. "Our top soil is running away!" he shouts, as his glance takes in gully after gully. The Commission in its long-time program for the restoration of wildlife will do everything it possibly can through its public relations activities to impress upon the landowners of the Commonwealth the need for carrying on certain agricultural practices which will benefit their farms as well as wildlife, because wildlife is very essential to the future development of the farm.

Today the Soil Conservation Service is showing thousands of farmers how they can save their top soil by developing new farming practices under cooperative agreements with the Service—practices which will undeniably result in much better farming conditions for the future. The Agriculture Adjustment Administration is paying benefits to farmers for carrying on wildlife practices, such as the protection of woodlots, the planting of fence rows, etc.

None of these things are being done, as one landowner was heard to remark, "just to increase the rabbits on my farm for the hunters to shoot". Sportsmen of today, by virtue of necessity, are not motivated by selfish interests. Perhaps there was a time when such a thing did exist, but the motivating factor today and of tomorrow is that of guaranteeing not only our future recreation and sport, but the very economic foundation of our country. For that reason the conservation movement deserves the greatest support every citizen in the State can give it. When and if each of us—sportsman, farmer, school teacher, industralist, etc.—realizes that our natural resources are valuable beyond any human tendency to enjoy the sport they offer; that their devastation would spell future disaster for the nation; that the duty and the problems of managing and preserving them rests not with one but all groups; then we shall never need to worry concerning these great contributions to our national and community welfare.

The conservation movement deserves the greatest support every citizen can give it.

The Eastern Goshawk in Pennsylvania

(Continued from Page 5)

tion of the birds in no way effects a general control of the species.

When we consider that, of the total of 278 birds received, 169 of them were shot during open season for small and big game, it would appear that practically all of these would have been shot by hunters, regardless of whether or not there was a bounty offered for their destruction. Trappers, who no doubt were interested solely in taking these hawks for the bounty, except when accidently caught in traps set for fur bearers, accounted for only 62 birds. The remaining 47 birds were shot during the last two weeks of December, and during other portions of the three bounty periods.

However, when the goshawk migrates into Pennsylvania in vast numbers, as it did during the winter of 1936-37, a bounty is probably the only measure which will exert any appreciable effort toward control over them after the close of the open game season. It is to check during periods of heavy invasion any inroads upon our native game birds and animals which themselves might be sparse in numbers, that the bounty upon the goshawk might well be maintained, even though in normal years small good is derived therefrom.

(Figure II)

Total Goshawks Received

	Mature	Immature
Males	62	40
Females	114	40
Unknown	17	5
Totals	193	85

Immature Goshawks about to be fed. They were taken alive as fledglings and held for exhibition purposes.

(Figure III) Measurements of the Eastern Goshawk

Female Birds

	Mature Maximum	Mature Minimum	Mature Average	Immature Maximum	Immature Minimum	Immature Average
Weighs (lbs.)	3.44	1.61	2.410	2.72	1.28	2.146
Length (ins.)	25.1	21.1	23.89	25.5	21.4	24.09
Wingspread (ins.)	47.4	41.0	45.37	47.5	41.7	45.25

Male Birds

	Mature Maximum	Mature Minimum	Mature Average	Immature Maximum	Immature Minimum	Immature Average
Weight (lbs.)	2.61	1.45	1.857	2.11	1.30	1.753
Length (ins.)	24.3	20.8	21.80	23.1	20.5	21.98
Wingspread (ins.)	46.0	41.0	42.50	45.3	39.1	42.24

(Figure IV) Food Chart of the Eastern Goshawk

Mammalian Diet	Number	% Mammalian Diet	% Total Diet
Grey Squirrel (*Sciurus carolensis*)	20	35.1	18.9
Cottontail Rabbit (*Sylvilagus* sp.)	16	28.1	15.1
Red Squirrel (*Sciurus hudsonicus*)	7	12.3	6.6
Chipmunk (*Tamias striatus*)	3	5.3	2.8
Mouse (*Microtus pennsylvanicus*)	2	3.5	1.9
Rat (Species unknown)	1	1.7	.9
Fox Squirrel (*Sciurus niger*)	1	1.7	.9
Flying Squirrel (*Glaucomys volans*)	1	1.7	.9
Shrew (*Sorex* sp.)	1	1.7	.9
Undetermined Mammals	5	8.8	4.7
Totals	57	99.9	53.6

Avian Diet	Number	% Mammalian Diet	% Total Diet
Domestic Chicken	19	38.8	18.0
Ruffed Grouse (*Bonasa umbellus umbellus*)	14	28.6	13.2
Ringneck Pheasant (*Phaisanus colchicus torquatus*)	1	2.0	.9
Crow (*Corvus brachyrhynchos brachyrhynchos*)	1	2.0	.9
Downy Woodpecker (*Dryobates pubescens medianus*)	1	2.0	.9
Undetermined Birds	13	26.5	12.3
Totals	49	99.9	46.2

The deer kill in California last year numbered 45,529, which was far in excess of any previous record for the State. The year before it was 43,250.

The Federation of Sportsmen's Clubs of Northampton County recently approved the idea of furnishing the Pennsylvania Game News to all Junior, Senior and Elementary Schools in that county. The club's secretary, Mr. F. L. Rice, is writing all schools concerned regarding the plan of the County Superintendent. Teachers and pupils alike will know that the County Sportsmen's unit is sponsoring the idea. This is a fine gesture and worthy of promotion by other associations.

"Deer kill in Diamond and Harry's Valleys good, there are plenty of deer left in this area in comparison to amount of available feed. Snow developing to ice kept deer kill below what it would have been, if better hunting conditions had prevailed. A majority of the hunters were trying to secure a buck and then later found that it was very hard to even get good shooting at does. The illegal

Remains of small mammals and birds taken from a Goshawk's nest in Cambria County.

Osage Orange and Wildlife

Continued from Page 10

is best accomplished through direct seeding, the trees making a growth of one to two feet the first season. Recommended seed treatment (3), is to collect fruit after frost, and keep in warm place to hasten initial decay or fermentation. As soon as possible the seeds should be separated by pulping in water. Sartify clean seeds at low temperature for two months and soak in water for five days prior to planting. "A bushel of Osage-oranges contains eighty fruits. These eighty fruits were found to have 24,422 seeds." Undoubtedly, propagation by cuttings can be successfully worked out.

Outside of competing with cultivated crops for soil nutrition (2), and harboring a phase of the San Jose scale, there are no serious objections to Osage-orange. Surely, there are many places, within its range, where this excellent food and cover plant can be used. Many worthwhile experiments, some already suggested by other workers (4), should be carried out. The plant certainly should be tested further to determine its resistance to fire, and to browsing by both deer and cattle. It may have considerable value in restoring small game cover on heavily browsed deer ranges and also in pastures. Has anyone planted it in thicket clumps? Conservation agencies, in those states where strip-mining is practiced, would do well to test Osage-orange on strippings—provided of course that the strippings are well within the plant's range. It winter kills if planted too far north. Finally, as any farmer can vouch who has attempted to eradicate an old hedge, this plant has a tenacious habit. It might be used very successfully for stream bank protection.

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   1887. Report of the Commissioner of Agriculture.
   Washington, D. C. (See p. 690).
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   1938. Native woody plants of the United States, U. S. D. A. Misc. Publ. No. 303. Washington.
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   1939. Fox squirrel utilization of Osage-orange in Kansas. Journ. of Wildlife Management, 3: 117.

Education in the Snow

Continued from Page 11

tents and, armed with hunting knives or penknives, set off in a new direction each week. By the time the bags are empty, our hikes have radiated out from Carson Long like the spokes of a wheel. For a mile or two around school we have speared sharpened low branches into ears of corn; we have scattered grain under hemlocks, in holes and hollow logs; we have built a few shelters and spread a table for game under them.

At the same time, we strive not to spoil those we seek to help. We do not scatter our grain lavishly like distributors of grocery circulars and then return to school smugly satisfied with our charity. Instead, we find where rabbit tracks are plentiful, where squirrels have been digging, or where birds have been scratching. At those places, near a hole or in good cover, we scatter a few handfulls of grains or impale an ear of corn. The food is there, a little in many frequented spots, to compensate somewhat for the obstacles winter places in the way of subsistence. The self-reliance of wild things cannot be seriously injured by enabling them in their ordinary quest for food to find a few unexpected kernels to rattle in cold, empty stomachs.

It annoys us to see the crow tracks around our shelters, or actually to see the bold, raucous fellows fly away—with full craws we fear—when we approach to inspect or replenish. These weeds of the bird species are too alert for handouts; but, of course, there is a little graft in every system.

While they are welcome to it, the smaller birds, the sparrows and snowbirds and waxwings and cardinals, do not need our help as much as the larger, game birds do. Much of the food of the latter is covered with snow, and the work of walking through deep snow in search of it is tedious and of uncertain reward. The smaller birds, however, find that snow offers them a feeding platform.

Sammy, bundled up, an ear of corn half thrust into each pocket, observed this. "See those tracks?" He pointed: "See how that little bird hopped from weed to weed where the tops of 'em stick up above the snow. That's where his tail dragged, too. He was so light he could stand on the snow and eat the weed seeds."

In all of our distribution of feed, however, we are not so frugal. Demand determines the supply. Where observation assures us there is a large game population, our generosity waxes. This is particularly true of the Pines, several acres of twenty year old State planting well up on the ridge behind school. This thick growth provides birds protection from blustering winter and has become known to them as a place where food can be found no matter how scarce it is elsewhere. Pheasants in particular are our guests there. To accommodate them, the Hiking Club spreads out in a long thin line and drives through the Pines, each boy impaling ears of corn on the low branches of the trees at about thirty yard intervals. In a far corner we also have a sturdy shelter that we keep stocked with mixed grain. On subsequent feeding drives, it is customary for us to flush at least a half dozen grouse as well as to cause excited flutterings and chirpings among many smaller birds. Even the rabbits have been attracted from the surrounding woods. It is gratifying to find tracks and droppings—the latter after a while assume chicken coop proportions—testifying to the efficiency of our work.

This is the way on winter Fridays when school is over that we prevent education from ceasing. Before spring arrives to lift our responsibility, before a cardinal whilstes the retreat of winter from the tip-top of a still bare tree, we have developed a sense of having played a helpful part in nature. A few more game animals and birds will breed and make our hikes interesting; a few more winged midgets will delight the eye and ear in the festive seasons. Our debt to nature in the currency of conservation has been paid.

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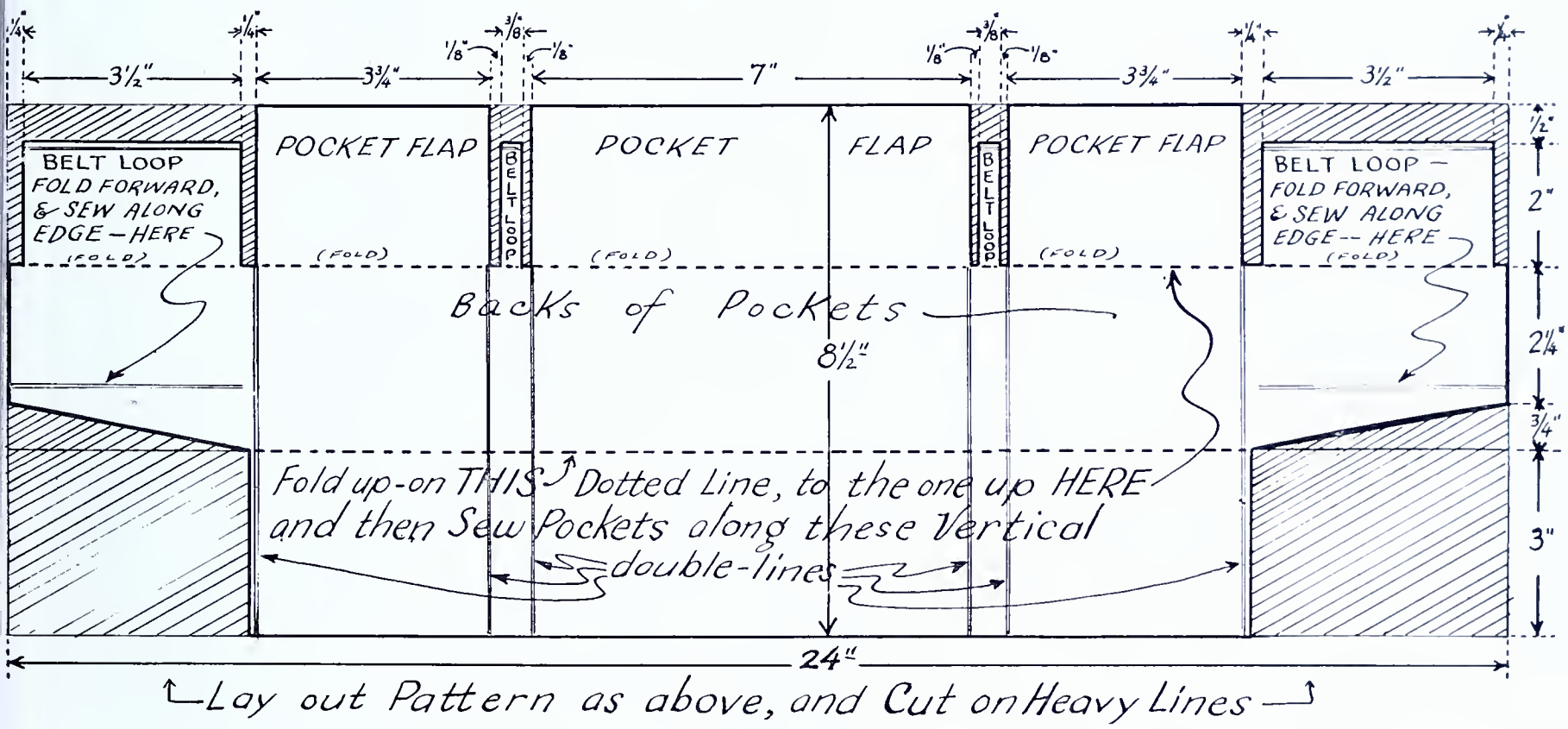

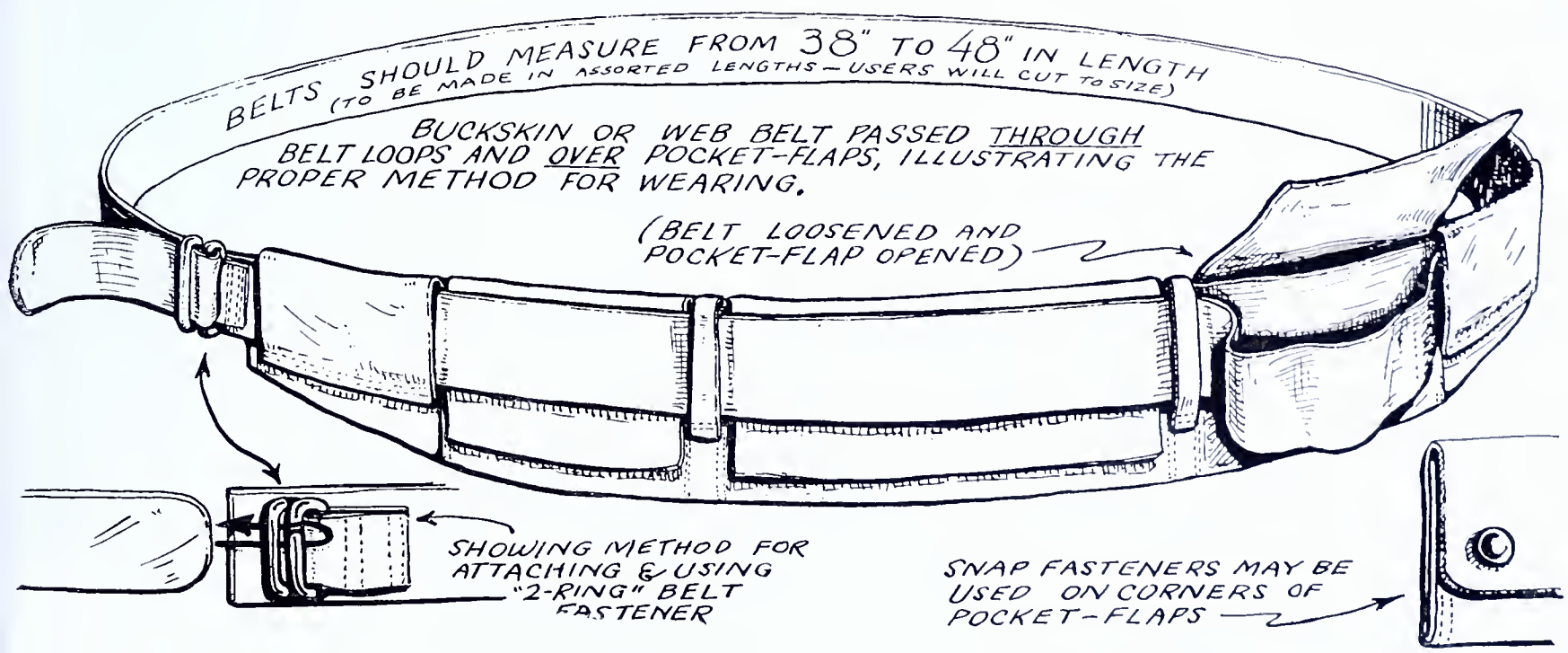

Courtesy Paul H. Love, Philadelphia, Regional Executive of the Boy Scouts of America.

An Obligation!

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PENNSYLVANIA GAME NEWS

MARCH 1941
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PENNSYLVANIA GAME NEWS

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VOL. XI, No. 12

EDITORIAL

MARCH 1941

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★

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SPORTSMEN'S QUERIES

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★

Cover by Joe Wolf

Just A Dog

Reprinted from February 1941 issue of Field & Stream

Ray P. Holland
Editor of Field & Stream
New York, N. Y.

Freedom, New Hampshire
November 24, 1940

Dear Ray:

I KNOW this is a kind of unusual request; but I'd like to borrow some space in your columns to write an open letter to a man I do not know. He may read it if it is in your columns; or some of his friends may notice his name and ask him to read it. You see, it has to do with sport—a certain kind of sport.

The man's name is Sherwood G. Coggins. That was the name on his hunting license. He lives at 1096 Lawrence Street, in Lowell. He says he is in the real estate and insurance business in Lowell.

This weekend, Mr. Coggins, you drove up into New Hampshire with some friends to go deer hunting. You went hunting on my property here in Freedom. You didn't ask my permission; but that was all right. I let people hunt on my land. Only, while you were hunting, you shot and killed my bird dog.

Oh, it was an accident, of course. You said so yourself. You said that you saw a flick of something in the bushes, and you shot it. All you saw was the flash of something moving, and you brought up your rifle and fired. It might have been another hunter. It might have been a child running through the woods. As it turned out, it was just a dog.

Just a dog, Mr. Goggins. Just a little English setter I have hunted with for quite a few years. Just a little female setter who was very proud and staunch on point, and who always held her head high, and whose eyes had the brown of October in them. We had hunted a lot of alder thickets and apple orchards together, the little setter and I. She knew me, and I knew her, and we liked to hunt together. We had hunted woodcock together this fall, and grouse, and in another week we were planning to go down to Carolina together and look for quail. But yesterday morning she ran down in the fields in front of my house, and you saw a flick in the bushes, and you shot her.

You shot her through the back, you said, and broke her spine. She crawled out of the bushes and across the field toward you, dragging her hind legs. She was coming to you to help her. She was a gentle pup, and nobody had ever hurt her, and she could not understand. She began hauling herself toward you, and looking at you with her brown eyes, and you put a second bullet through her head. You were sportsman enough for that.

I know you didn't meant it, Mr. Coggins. You felt very sorry afterward. You told me that it really spoiled your deer hunting the rest of the day. It spoiled my bird hunting the rest of a lifetime.

At least, I hope one thing, Mr. Coggins. That is why I am writing you. I hope that you will remember how she looked. I hope that the next time you raise a rifle to your shoulder you will see her over the sights, dragging herself toward you across the field, with blood running from her mouth and down her white chest. I hope you will see her eyes.

I hope you will always see her eyes, Mr. Coggins, whenever there is a flick in the bushes and you bring your rifle to your shoulder before you know what is there.

COREY FORD.

Photo of large sketch of John M. Phillips autographed by many of his friends.

Photo Trinity Court Studio

A TRIBUTE TO A PIONEER

John M. Phillips Honored

ON February 15, 1941, in the Hotel Schenley, Pittsburgh, Pennsylvania, over 600 sportsmen and prominent citizens of this and of other States, and of Canada assembled to pay tribute to one of the most outstanding conservationists of all time—John M. Phillips.

The occasion was not only one of honoring a grand old man of conservation, a friend of the sportsmen, and a leader of the Boy Scouts, but to celebrate the 80th birthday of a tireless old war horse. Prominent speakers unveiled monument after monument to his unselfish efforts, his courage, and to his accomplishments in the interest of wildlife.

Some of the speakers were old companions in arms and helped to fight many of his battles in behalf of the sportsmen. However, only those who have been privileged to sit by his side in moments of relaxation and listen to the stories of his past, his experiences hunting and fishing as a young man in this country and in Canada, his subsequent determination to rehabilitate the wildlife of the Commonwealth, and the opposition which threatened to smother him on every hand, really know the trials, the tribulations, the almost insurmountable obstacles with which he had to contend. He looked defeat in the face more than once, but not for long.

The gathering at Pittsburgh in his honor is something that will be long remembered in the annals of Pennsylvania conservation and it was symbolic not only of what he did for conservation, but that at eighty this grand old man is still strong, still courageous, still willing, still able to pass on advice to those who have been following his example for the past quarter of a century.

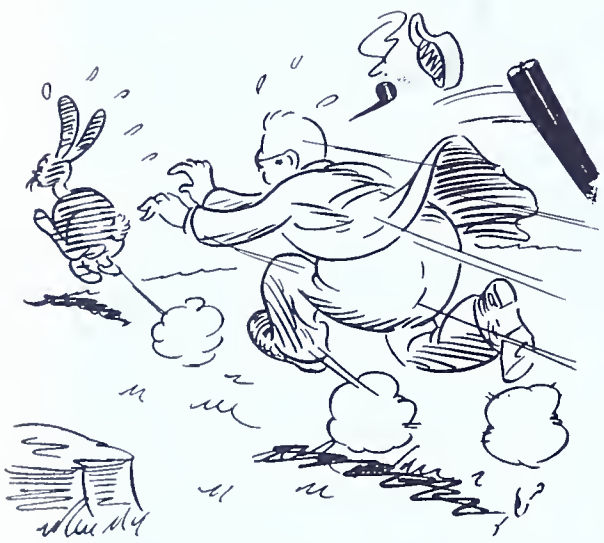
The outstanding event of the entire occasion occurred when two Boy Scouts presented him with a huge heart inscribed "our valentine". He was given a tremendous ovation. Another rousing ovation was given when Ross L. Leffler, President of the Game Commission, presented Mr. Phillips with an album containing the inscribed photographs of numerous friends throughout the United States and Canada. Page one of the album contained an autographed photograph of President Franklin D. Roosevelt and one of Governor Arthur H. James. Others included Dan Beard, American head of the Boy Scout organization; Jack Miner of Kingsville, Ontario, known world-wide for his migratory waterfowl refuge; "Ding" Darling, nationally known cartoonist and former head of the U. S. Biological Survey; former Senator Harry Hawes of Missouri, father of the national Black Bass Act; William Finley of Oregon, nationally known for his efforts in behalf of the antelope and the salmon fisheries of the Columbia River; John J. Kane, Chairman of the Board of Allegheny County Commissioners, and Cornelius D. Scully, Mayor of Pittsburgh; all past and present members of the Game Commission,and the field and office administrative heads of the Commission.

Hoyes Lloyd of Ottawa, Supervisor of Wildlife, Canadian National Parks, extended to him the greetings of the Canadian sportsmen. John K. Tener, former Governor of Pennsylvania, long an associate of Mr. Phillips in his conservation activities, reminisced of the days when conservation was in its teens, and praised Mr. Phillips for his leadership. Harmar Denny, National Council, Boy Scouts of America, told the sportsmen of Mr. Phillips' interest in the youth movement since the days of 1910. His work with the local Pittsburgh Chapters of Boy Scouts was also emphasized.

Former U. S. Senator Frederick C. Walcott of Connecticut, chairman of the first Wildlife Committee of the U. S. Senate reviewed the activities of Mr. Phillips in national and international conservation work. Other guests at the speakers' table included Charles French, Commissioner of Fisheries; G. Albert Stewart, Secretary, Department of Forests and Waters; Bob Cooper, Chairman, Southwestern Division of the Federation; Archie Hanes, First Vice-President of the Federation; Seth Myers, Chairman of the Northwestern Division of the Federation.

(Additional Photos on Page 31)

The Ones That Got Away



"He forgets everything and races through the orchard in pursuit of the rabbit."

BANG! BANG! The president of the Gun Club rapped the table with his gavel and announced "The meeting is adjourned."

The secretary recorded the time of adjournment and closed his notebook. The club members pulled their chairs in a circle around the big iron stove which was glowing cheerfully in the center of the room. Soon the air grew thick with pipe smoke as the boys swapped yarns about the great shots which were made and missed in seasons past. The secretary listened with a smile, and almost before he realized it, he had opened his notebook and written across the page: THE ONES THAT GET AWAY.

I. How the Squire Was Caught in the Act

It is late afternoon in November. A few loose clouds, that intermittently blot out the warm sunlight, move east in a slow wind. Eastward also, like a loose and ponderous cloud, moves the Squire. Under his huge arm nestles a fine old long-barrelled twelve-gauge with which the veteran nimrod is famous for reaching out and bringing down his birds. Ahead of him ranges a springer spaniel. Dry snow squeals under the Squire's boots as he rolls through the country slowly and judicially as befits one of his size and position.

The Squire is hunting the best ringneck cover in the county, but two hours tramping through field and fence-row, oak wood and berry patch, has left his gun barrels shining and clean. As the dog ranges down the valley, the Squire's eyes light with anticipation. Ahead of him lies an old stubble field overgrown with wild clover and ragweed. It is a favorite haunt of the wily Orientals.

Only a barbed wire fence separates the Squire from his field. But what a fence! New, tight, and strong, it streaches across a deep creek to the Squire's left and up over a steep ridge to the Squire's right. Its triple teeth gleam sharply in the afternoon sunlight. The Squire pauses, ponders, and finally breaks his gun, shoving it under the fence. With a grunt he stoops, holds down the lower strand, and inserts one fat leg and his head and shoulders through the wire, whereupon no less than three barbs lay relentless fingers upon the Squire's broad behind. They fasten into his clothing with an eternal death-like grip. The Squire mutters and grumbles like a thunderhead.

Then, out of the tail of his eye, he glimpses his springer working frantically in the field beyond. He fumbles futilely behind the vast circumference of his pants. And then—

And then twenty yards in front of him, sounds the harsh cry of a hugh cock ringneck as it sweeps up into the frost sky with tantalizing slowness. Dismay glazes the Squire's eyes. He collapses weakly in the barbed wire.

II. Why Jim Doesn't Like Much Salt With His Meat

As the noon whistle at the glasshouse blows a long shrill blast, men straighten up from their work and troop to their lockers for their lunch buckets. Big Jim reaches into his cupboard and hauls out his lunch and a box of twelve-gauge shells. He hefts the shells in his hand.

"Well, boys," he says in a loud aggressive voice as he looks at his fellow workers, "here's twenty-five shells. For me, that means twenty-five rabbits," he thrusts out his big red face at his audience. "We quit work at three o'clock this afternoon. I've got five bucks that says I'll have my limit before five o'clock."

"Don't you ever miss one, Jim?" asks Ed with mild sarcasm.

"Well,' says Jim modestly, "I did miss a rabbit once, about six years ago, but he was streakin' through a patch of standin' corn, and I only got a glimpse of him."

"I guess," Ed says doubtfully, "that we can excuse you for missin' that one."

The cottontail seemed to wave a derisive goodbye as he disappeared over the hill.

"When my old twelve-gauge cracks," Jim hastens to assure him, "all you have to do is go over and pick 'em up."

Ed looks thoughtfuly at the box of shells in Jim's big paw.

"How about takin' me along this afternoon?" he asks.

"Sure," says Jim generously, "you can kick 'em out, and I'll knock 'em down."

Ed smiles happily to himself and, after Jim and the others have gone back to work, finds an excuse to be near the lockers all that afternoon.

3:30 finds Jim and Ed ranging the fields just outside the little town. The rabbits are sitting tight, the warm sun having dispelled their scent, but Jim's little hound Flop is a good brusher. She soon roots out an old grandpappy of a cottontail whose portly hindquarters vanish into a grassy swale and reappear out of gunshot. Flop squeals excitedly, noses out the trail, and her high voice settles down to a steady baying.

She brings the rabbit around expertly. Jim stands near an old stake-and-rider fence which snakes its way down a gentle hillside. As the rabbit slips down the fencerow, Jim raises his gun slowly and swings deliberately. Ba-loom! Grandpa cottontail shifts into high. Ba-loom! The big rabbit lopes steadily to the end of the fence and disappears into a woodchuck hole

"All you have to do," says Ed to the sky, "is go over and pick 'em up."

"I'll show you, wise guy," says Jim grimly.

He stuffs two more shells into the twelve-gauge, takes two steps up the hill, and a rabbit bounces out from between his boots. Ba-loom! Ba-loom! The cottontail seems to wave a derisive goodbye as he flits up over the hill.

Jim's face grows red, but he says nothing. For the next hour or so he blasts away at numerous rabbits without touching a hair. His truculent boasting oozes out of him, and he gradually grows humble and worried. All the while, Ed is repeating Jim's boasts one by one. He laughs at him, jeers at him, taunts him, and challenges him. He rubs it in unmercifully, but Jim bears up in grim silence.

Finally, as five o'clock arrives and the two turn homeward, Ed says, "Well, Jim, I think you've had enough."

Jim looks at him blankly.

"I'll put it this way," chuckles Ed. "If you had knocked over a rabbit today, he'd have been salted as well as shot. Figure that one out."

Jim's face remains blank for a moment. Then he swears softly and digs a shell out of his pocket. He cuts the top off with his knife and pours out into his hand, not a little pile of number 6 chilled, no, just a pinch or two of salt

by Richard Esler

III. How the Big Buck Came to Orry

Everyone in camp has shot his deer but Orry. Three fat bucks hang from the "gallows" outside the cabin. Inside the cabin three hunters sing as they wash the dishes, whistle as they chop wood, and, like the Three Furies, constantly remind Orry that he has **not** shot his buck, whereas they **have** got theirs, and that tomorrow is the last day of the season.

That evening Orry glumly dries dishes, oppressed by the staggering gravity of his plight. He, the greatest rifle-shot in Elk County, he, the finest woodsman in—well, in the state—has not yet killed his buck. The fact that he has not even seen a legal deer is scant comfort to a man like Orry. He lives and breathes only to hunt. His mind is like a sports shop window, full of rifles and scopes and slings and levers and bolts and steel-jackets and hollow-points and trajectories and muzzle-velocities. Hunting is life and religion to Orry.

That night his sleep is miserable with nightmares in which nothing but antlerless deer flit mockingly past his rifle sights. In the morning a buoyant sun fires Orry's hopes afresh. He slips quietly across the broad brown flanks of the mountain, up a fire trail to the Caledonian Basin, and still-hunts in a wide circle back to camp. By noon he has jumped seven does. Outside the cabin he carefully jacks the cartridges out of his lever-action and leans it against the porch. The Three Furies ply him with beans, bacon, and boisterous regrets.

"Orry," they say, "we're going to get you your deer this afternoon. Down at the crossroads store this morning old Pop Martindale told us about a big buck that has been ranging Laurel Ridge. Pop saw him yesterday crossing the Notch. This afternoon we'll drive the Ridge for you."

Three o'clock finds Orry leaning immobilely against a big spruce behind a breast-high screen of laurel. His three drivers come within hearing. They are beating the brush like three mowing machines. One is reciting the Gettysburg address at the top of his lungs, another is imitating a fire siren, and the third is singing insulting verses dedicated to Orry.

Suddenly the raucous voices cease for an instant, then break out in an excited chorus—"There he goes, Orry!"—"Jeez, did you see that rack!"—"He's headin' straight for the Notch!"

Orry freezes. Without moving his head he glimpses out of the corner of his eyes a gray-brown ghost gliding silently over the needle-covered trail that leads directly past his stand. The silent shadow grows into a buck who miraculously stops not thirty yards in front of Orry and cocks his head to the rear. The biggest buck Orry has ever seen, with a massive set of antlers, thick and knobby at the base, which spread into six heavy points on each side. With infinite caution Orry raises his rifle, centers the sights on the vertebrae of the neck, and squeezes the trigger.

Click! The hammer falls on an empty chamber. Orry swings the lever frantically. At the sharp clack-clack of the action the big buck whirls and races down the trail. Orry follows him with the gun, holding for a shoulder shot, but another futile click forces into Orry's mind the bitter, the inescapable, the awful truth. He has forgotten to load his gun. . . .

IV. How Horace Chose To Run

Horace has a roving mind. He is a creature of impulses, of fads and interests, of sudden enthusiasms and equally sudden collapses. He has an enormous capacity for work, and when he takes on a new hobby, he steams with energy. In fact he works so hard at every new interest that it quickly dies of over-exploitation.

Picture Horace raising mushrooms in his cellar, larger and finer mushrooms than any grocer has to offer. Mushrooms become the breath of life to Horace, and for two months he eats and talks nothing but mushrooms. Then, suddenly, the mushroom fancy passes, and Horace becomes a breeder of Belgian hares. In a short time, his yard, his garage, and his very existence are transformed into a glorified rabbit warren. From meat farming he passes to taxidermy, and finally to hunting.

Yes, Horace decides to take up small game hunting. He first subscribes to all the outdoor magazines. He examines catalogues of hunting equipment. He talks to veteran nimrods. He studies technical volumes on gunning. He literally bristles with lethal statistics and spouts weird theories about shotgun shooting with little or no encouragement. He even delves into the social life and habits of the upland game which he intends to polish off.

Then he marches to the sporting goods store and buys a complete outfit of which the major item is a fine sixteen-gauge double. Horace goes into long technical consultations with the local gunsmith, and the sixteen-gauge acquires a beautiful custom-built walnut stock. One barrel is reamed out a little. A fraction of an inch is whacked off the muzzle. In handling ease and performance the gun comes close to perfection.

"Boys, here's twenty-five shells. For me that means twenty-five rabbits."

"Three barbs lay relentless fingers upon the Squire's broad behind."

When Horace is not hovering over the gunsmith, he is hard at work loading his own shells, concocting scientific powder and shot combinations according to the best authorities After weeks of preparation Horace is finally ready to go hunting.

On opening day he rises with the sun. Bubbling with enthusiasm, he picks up his hunting comrade George and heads for the fields and woods. The meadows are silver with frost, and the air is keen and zestful. Horace expands as they approach the farm and explains loftily to George, who is a veteran nimrod, just how much lead to hold on a quartering grouse and other such information as he has gleaned from his researches in the gentle sport of gunning

The two companions enter an apple orchard back of the farmhouse where Horace's first hunt begins. As they are tramping through the long grass between the trees, George stops suddenly and beckons to Horace.

"Look!" he exclaims. "Here's an old cottontail waiting for you. Now stand over here beside me, Horace, and I'll kick him out. Be ready to shoot."

Horace is trembling with excitement. His eyes are glued on the rabbit. George shoves the bunny with his foot, and the cottontail clears the grass in a frantic leap. Horace utters a wild yell. He forgets everything. He forgets his weeks of study; he forgets his hand-loaded shells; he even forgets his gun. He drops that custom-built sixteen-gauge on the ground and races through the orchard in pursuit of the rabbit until they both vanish over the top of the hill.

The secretary closed his notebook. The fire in the big stove at the Gun Club had burned low. All the stories were told, and the boys were ready to go home. The secretary rose to his feet and proposed a vote of confidence for the ones that get away. It was carried unanimously.

Photo by U. S. Forest Service

Timber Management, Kaniksu National Forest, Idaho. Logs in Priest River.

THE

By

LEO A. LUTTRINGER, JR.

★

A NATION to be kept happy must have assured facilities for living, working and playing. People must have employment and recreation, a certain amount of this and a certain amount of that. In other words, their life budget must be balanced. They must have the right things, or they will become unbalanced and unhappy.

I am convinced that the people of the United States will never reach a very low ebb spiritually, mentally, morally, physically, or economically, so long as they protect and perpetutate their natural resources, and genuinely appreciate their recreational and economic values.

We may suffer an economic depression or other catastrophe once in a while, but as long as our federal and state governments, our civic organizations, our farm and youth groups, our sportsmen and our farmers continue to take an interest in the conservation of wildlife and other natural resources, the possibilities of reverses will be greatly minimized.

Federal and state conservation departments are doing everything possible to safeguard the Nation's natural resources, and tremendous efforts are being made to insure the social, economic, and recreational welfare of the people.

Today people are learning more and more how to play while they work. They are learning how to conserve their playthings; they are learning how to properly use their natural resources and how best to conserve them; they are learning how essentially one phase of life depends upon the other, and why they must encourage all phases. They are learning that when the forests are gone there are floods; when there are floods there is subsequent erosion and, of course wildlife suffers, and agriculture becomes well-nigh impossible.

The U. S. Biological Survey* has under its jurisdiction a wide diversity of conservation projects. One of the most important of these is that of restoring suitable nesting, resting, and feeding areas for waterfowl. To help restore waterfowl it is necessary to give the birds an opportunity to breed, and to feed and rest on winter grounds where they are unmolested. To do this, habitat preservation and improvement are necessary.

Waterfowl Refuge Program

The first refuge for waterfowl was established in 1901 primarily for the benefit of pelicans, then severely persecuted by fishermen. The year 1909, when 26 National Wildlife Refuges were created, was the biggest year for bird refuges until the present administration. Before 1929, all Federal Bird Refuges with few exceptions were areas of public domain set aside by Presidential order.

In 1929 Congress passed a Migratory Bird Conservation Act which permitted the Biological Survey to buy refuges for migratory waterfowl. The act was signed by President Hoover on February 18, 1929, and was considered by many to be the most important wildlife conservation measure ever written upon the statute books of the Nation.

By 1933 the Biological Survey administered about 100 refuges, five and a half million acres of which had been certified by executive order and 220,000 acres of which had been purchased. By 1940 the number of national wildlife refuges had increased to 263 with a total acreage of 13,595,812 acres.

Hunting Regulations

Along with the refuge program, however, it is necessary to establish proper hunting regulations. To prescribe equitable hunting regulations the Survey takes into consideration the waterfowl inventory, a brief account of which appears later on in this story; reports upon migrations; nesting success; and many other factors. Before setting these regulations, Bureau officials obtain advice and suggestions from the various State Conservation Departments and from many other sources. The purpose of the Survey is to give the hunter as much freedom as possible without causing serious depletion of the waterfowl population. Obviously, if good duck hunting is to continue, the number of birds killed each year must not exceed or even closely approach the number reared to maturity.

D-Men

Today, there are about 70 full-time D-Men, or Game Management Agents as these men are officially called, operating throughout the country to enforce the Migratory bird laws.

*Since this manuscript was started, the Biological Survey and the U. S. Bureau of Fisheries were merged into one unit—the Fish and Wildlife Service, U. S. Department of the Interior. For the sake of clarity, therefore, especially as records go, the former name of the respective services shall apply in this manuscript.

MARCH OF CONSERVATION

A resume of the progress made by Federal, State and Civic Organizations in Restoring Forest, Wildlife, Fish, Soil and other Natural Resources and Guarding against their Future Waste. Concluded in the April Issue.

One of the problems today, from the standpoint of protection, is that of duck bootlegging. The illegal duck sellers find most of their markets in night clubs and among certain townspeople who receive duck bootleggers at the back door. The Bureau is cracking down on all these violators. Two years ago it sent special D-Men to the eastern shores of Maryland, Virginia, and Delaware, long the source of supply for big-time bootleggers dealing in migratory waterfowl that appear on the tables of restaurants in some of the larger cities. Within six months, more than 60 cases of buyers and sellers were brought to court, and Federal Judges have imposed severe fines upon them.

The Duck Stamp

As further aid to waterfowl, President Franklin D. Roosevelt, on March 16, 1934, approved the Migratory Bird Stamp Act which provides for the issuance of duck stamps through post offices. Ninety percent of the revenue is used to supplement other funds for the purchase and maintenance of waterfowl refuges and ten persent is used to cover administrative expenses, the printing and distribution of the stamps, and the protection of the birds.

Research

Wildlife surveys and research in wildlife management are conducted, and the food habits of all types of wildlife, disease control, conservation of fur resources, and the distribution of migration of birds are studied.

Special subjects of research include: forest wildlife relationships; the relation of birds and other animals to agriculture; restoration of the Big-Horn Sheep, and other threatened species; propagation of game birds, rabbits and fur-bearing animals; studies of big game and upland game; and the control of destructive birds, rodents and predatory animals.

The Survey, the American Wildlife Institute, the State Game Department, and the State Land Grant College are cooperating in ten wildlife management research units in as many states. This program includes studying major game species, assembling data of practical application for game administrators, providing specialized training for advanced studies in the wildlife field and demonstrating the best management practices.

Units are now established at Alabama Polytechnic Institute; Iowa State College of Agriculture and Mechanic Art; Maine State University; Ohio State University; Missouri State University; Oregon State Agriculture College; Pennsylvania State College; Texas Agricultural and Mechanical College; Utah Agricultural College; and Virginia Polytechnic Institute.

Wildlife as a source of farm income has been studied in every state by bureau experts in cooperation with the Bureau of Agricultural Economics and a report on this work will probably be ready for publication within the year.

Waterfowl Inventories

In order that the Survey may act intelligently on its waterfowl problems, inventories are taken. Four biologists, one in each of the major flyways, study the breeding, nesting, feeding, and resting conditions for waterfowl in Canada, the United States, and Mexico. These men travel with the birds the year round. As well as studying migration habits, nesting and feeding conditions, and other important factors, they join in making the annual waterfowl inventory, which as of January 1, 1940 was estimated at 65,000,000. Another inventory for 1941 is now being undertaken.

Bird Banding

Bird-banding aids in the study of migration and also produces data that is valuable in determining the policies and practices in connection with migratory bird hunting regulations. The study of the subject has resulted in the recognition of four major North American flyways that have been named the Atlantic, the Mississippi, the Central, and the Pacific.

Records from 1920 to June, 1938, show that employees of the survey and cooperators in the United States and Canada banded 2,847,494 birds, and 175,914 returns were recorded. In 1940, 428,185 birds were banded with 32,016 returns. The total number banded as of June 30, 1940 amounted to 3,712,327 with 234,926 returns.

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Photo by Biological Survey

An adult female lion tied up.

Photo by Biological Survey
Royal Terns on Cape Romain, North Carolina Refuge.

The flyway concept has come to have an administrative significance, chiefly in connection with the continental resource of migratory waterfowl. This was brought forcibly to attention during the years of the Great Drought when the ducks and geese of all flyways, particularly the Central and Pacific flyways, were so greatly reduced in numbers. Because of the adherence of individual birds to their ancestral routes of migration, it then became apparent even for species with a continental distribution, that those using one flyway might be so reduced in numbers that their perpetuation there would be seriously endangered, while at the same time in an adjoining flyway, the same species might be abundant. It became further apparent that a flyway concept would conveniently serve also for grouping the various migration routes used by non-game species.

U. S. Bureau of Fisheries

Every fisherman knows how difficult it is to locate that "old fishing hole". And think what a job he would have if the elaborate machinery of fish culture had not been developed. Four out of five streams and lakes in the United States are annually stocked with billions of young fish by the U. S. Bureau of Fisheries and the state fish hatcheries.

Commercial Fisheries

The abundance of fish in the western Atlantic off Greenland, Newfoundland, New England, and Nova Scotia was responsible for the colonization of North America by the peoples of Europe. As early as the tenth century colonies were established in Greenland by the Norsemen who prosecuted the cod fisheries on the Grand Banks. With the industrialization of New England, however, and the erection of dams on all the major rivers, serious decline in the abundance of anadormous fishes, including shad, alewives, and salmon, became apparent. Throughout the years, protection and improved methods sometimes combine to halt the steady decline of these species.

Today the importance of the commercial fisheries of the United States and Alaska in the economic life of the United States is emphasized by the fact that the total annual catch of fisheries' products in the United States and Alaska as based on the most recent surveys, amounts to 4,352 549,000 pounds valued at $100,845,000. The industry handled $251,000,000 worth of domestic fishery products in 1937.

Shad

Ask any easterner to name his favorite food fish, and the majority will answer shad. Along the whole length of the Atlantic seaboard, people look forward to the spring runs of shad to provide them with a rich and delicious sea food. At one time the shad ranked among the three most abundant food fishes of the United States, furnishing an annual catch of some 48,000,000 pounds and providing a livelihood for about 25,000 people in small communities along virtually all the coastal rivers. The industry has now declined to 28th in value of production with an annual catch (in 1937) of only 9,600,000 pounds—the loss of a great potential profit to the fishing industry.

How to rejuvenate this industry is one of the most pressing fishery problems of the Atlantic coast. To that end the Bureau recently established headquarters at the University of Maryland and Charleston, South Carolina. From here observations are being made by field investigators in an effort to solve the problem.

Salmon

More than 25,000 persons are employed in the salmon industry and the pack of salmon averages about 7,000,000 cases or nearly 350,000,000 one-pound cans annually, of which upward of 90% was produced in Alaska. This healthful food is valued at approximately $45,000,000 each year, or about twice the annual production of gold in the Territory. The industry provides about 70% of the revenue derived by the Territorial Government from taxes. It is truly the backbone of the economic structure of Alaska.

The task of conserving this most important resource in the face of severe exploitation is a herculean one, and the Bureau of Fisheries, and a competent staff of investigators has done a splendid job of providing adequate protection to perpetuate this great

Photo by Nationaly Park Service
Buffalo on feeding grounds, Yellowstone National Park.

industry. There are five species of salmon in Alaska waters; all five return to their native streams to spawn and die after spending a period of years in the ocean.

Techniological Studies

The fishing industry is reaping cash profits from many of its techniological findings. For instance, the bureau's recent work in demonstrating the highest vitamin potency of various fish oils in the United States has diverted to American fisheries much of the trade which formerly went to foreign markets. Studies on refrigeration and the shipping and stocking of fresh fish supplies have opened up a vast market for fishery products in the interior of the country.

Test Streams

The operation of test streams is another important activity of the Bureau of Fisheries. Through these test streams much of value is learned in the way of requirements of each species which will result in better fish production and subsequent restocking, and are undisputable testimonials to the value of scientific management in improving angling conditions.

Photo by U. S. Bureau of Fisheries

At one time the shad ranked among the three most abundant food fishes in the United States.

Oyster Industry

Few people appreciate the extensiveness of the oyster industry in the United States or the modern methods now used in producing the oyster crop. Progressive oystermen no longer depend upon harvesting their crops from public beds. Instead, they farm the waters just as land farmers have for centuries tilled the soil. In order that this water farming may be successful however, and that the greatest possible yield per acre of bottom may be obtained, the proper methods of cultivation must be discovered and put into practice.

To learn these facts the Bureau has studied the habits and reactions of oysters in their surroundings from Cape Cod to the Rio Grande and from British Columbia to the Mexican border on the Pacific Coast. In spite of the apparent simplicity of the program, its execution requires highly technical and complex studies.

For example, many of the problems of growth and fattening in the oyster center around its mode of feeding and respiration. The oyster feeds by straining through its gills large quantities of water from which it takes in microscopic organisms. By means of a complex apparatus designed in the Bureau's laboratories, continuous records of the oyster's feeding activities have been obtained for periods of from one to four weeks. Adult oysters during warm weather may filter water at the rate of 26 quarts per hour for an average of 20 hours per day. Thus, during a summer, daily requirements for water by an adult oyster may amount to 130 gallons—only slightly less than the per capita consumption of water in our industrial cities, and about 500 times the amount used by a human being for drinking.

Believing that the oyster grower, like the land farmer, needs information on the control of the natural enemies of his crop, the Bureau has devoted a great deal of time during the past two years to studies of the starfish, the oyster drill, and other pests of oysters which are found in costal waters. Methods of controlling the drill have now been developed, and the Bureau is furnishing advice to oystermen on simple and relatively inexpensive methods of reducing the numbers of this very destructive snail. Considerable advance has also been made in the study of the starfish, the principal enemy of oysters in northern waters.

Another important phase of the Bureau's oyster investigations concerns the effect of pollution. The Bureau is finding that in some cases the failure of oysters to grow and fatten properly is due to the presence of harmful trade wastes in the water. These pollutants may affect the oyster's growth indirectly, by reducing the duration and rate of feeding. Recent experiments in the Bureau's Yorktown, Virginia, laboratory indicate that pulp mill wastes are the cause of the hitherto unexplained failure of oysters to grow and fatten in the York River. It is the aim of the Bureau to develop ways and means for the coexistence of the oyster and manufacturing industries by urging the de-

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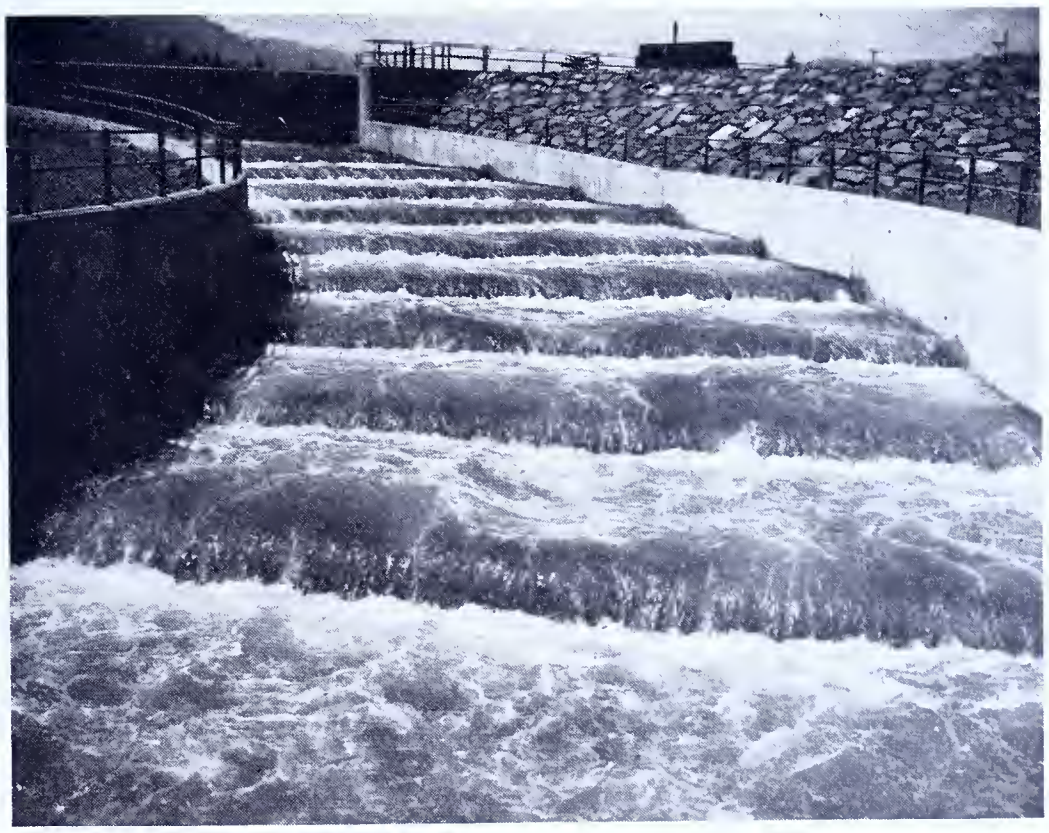

Photo by U. S. Bureau of Fisheries

Hundreds of thousand of dollars have been spent to build "ladders" by which the Salmon can circumvent the large dams on their way to their spawning grounds.

CROW SHOOTING

By ROBERT D. McDOWELL

DURING the late winter months, when snow has blanketed the ground, our native game birds and mammals are hard pressed for food. In spite of the extensive winter feeding program sponsored by sportsmen, Boy Scout troops, and other organizations in cooperation with the field force of the Game Commission, there are vast areas of land in the Commonwealth whose native supply of winter food is not augmented in any way. It is in these areas that the visiting hordes of crows from Canada play havoc with the fast diminishing food supply.

In great flocks they busily harvest the food throughout our southern countries. Their inherent pugilism, coupled with the fact that they are greatly superior in numbers, quickly overcomes any competition offered by the ringnecks, bobwhite quail, or the small game birds or mammals.

In an effort to somewhat help the game by reducing the numbers of these corvine invaders, sportsmen, in ever-increasing numbers, are trying their luck and skill at "roost shooting".

The writer has had the opportunity and good fortune to accompany several experts in these nocturnal raids, consequently it is his thought that some of their methods might aid other beginners in this interesting and helpful pastime.

The first step, naturally, is to determine in which particular wood lot the local crows will roost the night the shoot is scheduled. This is quickly and easily accomplished by observing the direction of the large, late afternoon flights. If the birds are flying eastward across one highway, and westward across the next paralleling road, then the roost lies between the two roads. By observing the flight across the roads to the north and south, therefore, the roost can be spotted. By using roads as indicators of flight direction the roosts can be located in a short time, especially if the shooters are using more than one automobile. It is very important that the actual roost is located. On a moonlight night crows will often change their position late at night.

Once the roost has been spotted, the next step is in getting close enough to the birds so that shotguns will be effective. If snow is on the ground, a pair of white denim coveralls and a white hood over other clothing will prove very effective in camouflaging the movements of the gunners. Never move quickly to the roost. Avoid all possible noise. Keep in a straight line, rather than attempting to surround the roosting birds. Wait for the signal of the leader before firing. NEVER SHOOT AT CRIPPLES ON THE GROUND. To do so will endanger the lives of your companions.

After the first barrage has been laid down, the birds will clear out from the patch of woods. On a foggy, murky night they will usually move only a short distance into a neighboring wood lot. Gather and kill all cripples before proceeding to the next firing line. On one dark night, the writer and two other men by slowly following the crows were able to fire eight volleys into eight different roosts, bagging 347 birds.

Old Corvus issues a throaty challenge to the hunting fraternity.

In all instances contact the landowners in the vicinity before shooting a roost. Almost any farmer is only too glad to secure help in ridding his land of these pests, however, nobody likes to be awakened from sound sleep by the crashing of shotguns in his nearby wood lot. Be considerate of the landowners at all times, and you will insure future sport for yourselves and others.

Luring the wise crow into gun range with a crow call is great sport. Although this shooting doesn't produce the results en masse of roost shooting, it adds the zest of pitting ones skill against a wary adversary. In addition it provides good gunning practice between hunting seasons; far better than that provided by clay bird shooting, because each shot is different from the preceeding one.

The best time of the year to call crows is when the young are still in the nest or just beginning to fly. However, one can have good shooting in the morning and afternoon preceeding a roost shoot. The most important thing in calling is to take advantage of any available cover in the vicinity Some persons can call with their voices, but the writer prefers one of the patented callers. It is not so tiring, and the call can be quickly taken from the mouth for each shot, if the shooter attaches it to a string around his neck.

Shooting crows in flight also provides good sport. On a very windy day the birds will fly close to the earth, taking advantage of the prevailing winds. If the shooters conceal themselves either parallel to the flight or at right angles to it, they will be able to shoot for some time. If the birds veer off, try calling. It often brings the following birds right back to the original flight lane.

One cold, bitter afternoon two of us came across the most stupid flock of crows we had ever encountered. These were the birds that proved the exception to the statement that the crow is a "wary adversary". They no doubt had seen man before, but man plus a shotgun, plus a crow call, was to them (and particularly to about fifty of them) a new but bitter experience. Dressed in dark woolen clothes, without any cover whatsoever, we blazed away at cawing, milling birds until both of us were out of shells. These birds had probably just arrived from the far North, without being shot at enroute. But they learned only too quickly. The next day we returned with a movie photographer (just so that we could squelch the loud and sarcastic razzberries that greeted us when we told our stories) only to bag one lone, probably deaf, and certainly dumb bird.

Another time three of us were calling crows in a particularly sparse woods. We had to take cover against separate large tree trunks. Three crows in, three crows down. As we stepped from our hiding places each of us exclaimed "I'm up three." Strange as it seems, paging Mr. Ripley, all three guns cracked at the same bird simultaneously on three different occasions.

Another time, Pat, one of the usual triumverate, was perched precariously on his "hunkers" upon the edge of a stone pile. We were shooting the birds in flight as they were flying about fifteen feet above the ground and about thirty yards parallel to our hiding place. A bird came over. Pat's gun cracked and then the shooter disappeared from our view. Both victims hit the frozen ground together. It was so cold, and our trigger fingers were so numb, that Pat had inadvertently touched off both barrels. He tells us that two three and three-quarter dram loads pack quite a wallop.

Several times hawks have been lured in when calling crows. On one occasion particularly we aided wildlife in the vicinity by adding a pair of Cooper's hawks to quite a score of crows. One bird had the remains of a quail in his stomach, and the female's stomach revealed three pairs of song bird legs.

Let the writer suggest that the hunter who desires to keep in trim for the season try his luck against the crow. Try calling them during the winter afternoons, and then together with some friends with a similar liking, try sneaking up on the birds in the roost.

Let the writer again reiterate that at all times extreme caution and rigid adherence to prelaid plans are essential to the success of the hunt and the safety of the participants. Loading and unloading firearms is risky at all times, particularly so in darkness. NO SPORT DERIVED FROM SHOOTING CAN EVER COMPENSATE FOR THE LIFE OF A FELLOW HUNTER.

A Saga of The Wild

By Thomas F. Bell
and
David R. Titus*

DOWN in Lockes' Valley, which lies between the junction of Blacklog and Shade Mountains in Southern Huntingdon County, they do a lot of hunting and take their deer hunting especially serious. Ask any man from that section where he prefers to hunt and he will almost invariably answer, "Lockes Valley." This perference is not because of the quantity or quality of the deer there but because of a certain tradition that draws the local nimrods into that little valley. Their fathers and grand-fathers did their hunting in that section before modern means of transportation were available. They hunted from the Narrows to Pots' and Dead Level Gap when turkeys were wild and plentiful, deer scarce, and sweet chestnuts could be scooped up by the handsful almost anywhere in the woods. Naturally, these native sons are a little jealous of anything that tends to destroy their traditional sport. They are very set against dogs running deer.

It was in the late winter of 1940; one more week and winter would take a bow in favor of the first month of spring. Only a few days before a heavy snowfall occurred which buried the ground to a depth of from twelve to fourteen inches. It drifted to greater depths where the wind had a free sweep. We had been having the usual routine number of complaints about dogs running deer in various sections all winter. Each report had been disposed of in some satisfactory manner. A case occurred here and there where the deer were being run down and killed. In such instances we made special efforts to catch these dogs. These efforts were usually successful and their owners were fined. Where we were unable to locate the owners we simply disposed of the dog and considered the case closed.

On Sunday evening, February 25, 1940, David Titus, Game Protector at Three Springs called me by phone. I could tell by the tone of his voice that something unusual was in the air. Titus doesn't get excited without undue provocation and then he usually counts ten. After the usual greeting by phone he broached the subject very briefly and I arranged to meet him at the Shady Inn, Shade Gap, the following morning. When I pulled in on the parking lot at the Inn, Titus crawled out of the cab of his pick-up and approached my car with a grim and determined look on his face.

"How goes it Titus!" I greeted him.

"Pretty good," he responded unchangingly and launched into the subject. He told of having been called on this case three days before, on Saturday, and of working on it that day and all day Sunday. He thought at first that it was just another dog case that would be quickly disposed of without bothering any of the other fellows, as is Titus' attitude toward any job that he can dispose of himself. However, as he put it, "Tom, this is no ordinary deer dog. This big devil kills for the joy of killing and leaves his dying victim to hunt another. To be truthful, I wouldn't want to meet him myself without a gun. There is at least one smaller dog running with him."

*Game Protectors

The biggest police dog we had ever seen.

The way Titus wastes words you'd think he borrowed them from a finance company so I knew there must certainly be something unusual in the offing. I unlimbered my .250 Savage and boarded his truck for the few miles into the head of the valley. On the way in he acquainted me with the rest of the facts and we planned a campaign. I noticed that he had his old 12 Ga. Winchester hitched inside the truck cab.

If you have never hunted a real bad killer dog you can't begin to imagine the desire that burned within us to get a look at this dog, or dogs, which to date had killed and left unconsumed the carcasses of seven deer, the throat of each neatly cut just back of the jawbone. In some instances it appeared the dog had made but one pass at the animal's throat, one gash only being visible. The feeling that we had must have been akin to that which fills a gunner in a tiger hunt. In the dog hunt, however, we had a triple interest: to run down the dog, the thrill of the chase, and to protect the deer.

On the way up the valley we stopped at the home of Philip Locke and inquired if the dogs were running as usual. He informed us that they had been quiet that morning but had run all the night before. He further stated that another deer had been found up the valley, killed in the usual fashion, and that he and his family thought that one had been killed on the mountain across from their place during the night judging from the fearful racket made by the dogs in one spot. We were told how the day before a nice doe had been driven into his farm lot and before he could rescue her the dogs (by their continual and merciless tearing at her limbs and vitals) had actually forced her to take refuge under a small foot bridge over the nearby creek. There the killers finished her. Even as the Locke brothers rushed for a gun the luckless doe bleated pitifully her last in fear and agony as the terrible fangs tore at her jugular.

Such stories as this surely aroused me and I became as determined as Titus to bring these devils to justice. A dog hunt is usually more or less routine with us but this hunt became an obsession, a determination not to leave off until some of the deer had been avenged. After we had the promise of some help from the native boys we drove on in for a couple of miles and left the truck. From there we hiked to a camp about a half mile further where we built a fire and established a temporary headquarters. Titus figured from his experience of the day before that this spot was about the center of operations. During the day we made several short sallies into certain sections nearby where we happened to hear dogs yapping, but we saw no signs of a living dog.

On every attempt to overtake or head them off, the dogs, as if they were spirits, would

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The authors, Bell (left) and Titus displaying one of the big razor-sharp fangs of the killer.

NINTH ANNUAL FEDERATION MEETING

THE Ninth Annual Meeting of the Pennsylvania Federation of Sportsmen's Clubs, held in the Forum of the Educational Building at Harrisburg on February 12, marked another milestone in the history of game, fish and forestry conservation in the Keystone State.

Always an inspiration, the meeting bespoke unity of purpose, and the efficient and businesslike manner in which it was conducted, to say nothing of the constructive suggestions and subsequent intelligent resolutions that were presented, proved beyond doubt that all matters concerned had been given serious thought and study.

That the Resolutions Committee obviously did a splendid job was indicated by the expediency with which resolutions were acted upon on the floor of the assembly. The Resolutions Committee met the night before, following an inspiring talk by Governor Arthur H. James. The Governor not only commended the sportsmen for the splendid work they are doing, but expressed wonderment that in these trying times, with ominous clouds on the horizon, the people of this great State and Nation had enough interest in wildlife to take time out to talk about hunting and fishing. He said as long as that spirit continues to manifest itself in the red blooded people of America the future security of this country will never be placed in jeopardy. The Governor's presentation, which was delightfully informal, was enthusiastically received.

One of the highlights of the general session was a report of the Educational Committee, Robert Steventon, Chairman, which is hereinafter recorded.

Mr. Ross Leffler, President of the Pennsylvania Game Commission, addressed the Convention, and his talk was based along the lines of safety. He attributed the reduced number of deaths from hunting accidents and non-fatal accidents to the campaign that the Pennsylvania Game Commission put on urging the hunters to use every safety measure and precaution.

GOVERNOR ARTHUR H. JAMES

M. C. MERRITS
President

A telegram was read from Mr. William Fluke, former Game Commissioner, stating that he was sorry he could not be there due to illness.

Mr. Charles French, Commissioner of Fisheries, also spoke on the cooperation received from the sportsmen during the past year in carrying out their program, and asked for their support during the coming year.

There were fifty resolutions, as follows:

No. 1. RESOLVED: That the Department of Forests and Waters be thanked for their cooperation in providing better feed condition for the game, and also for stream improvement work; and that their continued and increased activities along these lines be requested. Approved.

No. 2. WHEREAS, Low water temperatures are highly desirable in trout streams, and,

WHEREAS in many instances when new highway bridges are constructed over small streams inhabited by trout, it is the practice to widen the stream channel to take care of flood conditions, thus raising the water temperature of the stream to the detriment of trout, therefore

BE IT RESOLVED: That the Department of Forests and Waters take this into consideration and require the Department of Highways, to provide a normal channel for the stream crossed within the bridge span and not change the natural flow of water. Approved.

No. 3. RESOLVED: That the Department of Forests and Waters be requested to place warning signs against the molesting of privately owned boats on State owned streams or dams where such boats are permitted to be kept. Approved.

No. 4. WHEREAS, many acres of State forest lands that were once cut and burned over waste lands are now, due to time and protection, clothed with timber, and

WHEREAS, much of this timber is even aged and so dense that there is little food for game, and

WHEREAS, selective cutting on this acreage will provide game food, increase the rate of growth of the remaining trees, and bring revenue to the Commonwealth, now therefore

BE IT RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs assembled in Harrisburg this 12th of February, 1941, urge the Department of Forests and Waters to start immediately a program of timber

ARCH HANES
First Vice-President

WITH THE CLUBS

REV. DARLINGTON B. KULP
Second Vice-President

stand improvement which shall gain the ends herein set forth as desired. Approved.

No. 5. RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs oppose any proposal to limit the size of fish of any species to be stocked by the Pennsylvania Fish Commission. Approved.

No. 6. RESOLVED: That the Fish Code and the Administrative Code be amended so as to authorize the Fish Commission to contribute an amount annually not to exceed 10 percent of the income of the Fish Commission for the purpose of applying the same to the cost and expenses of the Sanitary Water Board or any other agency, State or Federal, concerned with the enforcement of laws relating to the abatement of stream pollution in water of this Commonwealth, or for the purpose of directly eliminating stream pollution. Approved.

No 7. RESOLVED: That no change be made in ice fishing, except, that fishing through the ice be permitted on Sundays, and that the taking of perch on tipups be made legal. A limit of ten perch in one day to be permitted.

RESOLVED: That the daily limit for pickerel be six and the size limit be fourteen inches. Approved.

No. 8. RESOLVED: That we favor legislation that will provide adequate compensation for special fish wardens. Approved.

No. 9. RESOLVED: That the natural food for game fish is being depleted and therefore no fish bait taken from the waters of this State be sold or offered for sale. Approved.

No. 10. WHEREAS, under the Fish Laws there is nothing to prevent all members of the Board being appointed from one section of the State, and

WHEREAS, for the most efficient management of the Board it is necessary that each section of the State be adequately represented, Therefore,

BE IT RESOLVED: That the Fish Law be amended to provide that no two members may be from the same geographical district as set up in the eight Federation Divisions. Approved.

No. 11. RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs request the Fish Commission to make a serious effort to follow out the resolutions passed by the Federation during the past three years. Approved.

No. 12. RESOLVED: That the Fishing License carry the same outline of description as the hunting license. Approved.

No. 13. RESOLVED: That the Fish Commission authorize fish wardens to issue field receipts for penalties. Approved.

No. 14. RESOLVED: That we endorse the passage of the pending legislation designed to authorize fishing in reservoirs. Approved.

No. 15. RESOLVED: That this Federation recommend appropriate legislation so as to constitute the Sanitary Water Board an independent administrative agency with the power to select its own chairman, engage its own employees, have its own appropriation, and be given power to call upon the Fish, Game and Forestry Department employees for such assistance in the enforcement of the Pure Streams Law as they are capable of giving. Approved.

No. 16. RESOLVED: That the exemption now contained in Section 310 of the Pure Streams Act, which prevents the application of that law to the discharge of coal silt or coal culm water into the streams of Pennsylvania be eliminated. Approved.

No. 17. RESOLVED: That we so amend Section 716 as to permit the sale of skins or any part thereof of deer lawfully killed within sixty days after the close of the season, but prohibiting the sale of such hides from animals killed as a protection to crops. Approved.

No. 18. RESOLVED: That the State Federation of Sportsmen's Clubs recommend to the Board of Game Commissioners that in the selecting of future candidates for the Officers Training School, first consideration be given to Deputy Wardens of experience and good character who have the recommendation of the County Protector and the Sportsmen's Associations in their respective counties. Approved.

RESOLVED: That if, and when, another Training School is established for Field Officers, the Deputy Game Wardens be given preference to the others who apply. Approved.

No. 19. RESOLVED: That the entire month of November, Sundays excepted, for the year 1941, be declared as the regular grouse season. Approved.

No. 20. RESOLVED: That the Pennsylvania Game Commission use its influence to permit an open season on woodcock from October 15 to November 15, both dates inclusive. Approved.

No. 21. RESOLVED: That the shooting of varying hares be made legal, with a season to run from December 16 to December 31, inclusive. Daily bag limit two, six per season. Approved.

No. 22. RESOLVED: That game feed be made available in November and December for storage at outlying camps in order that it be more easily distributed in time of deep snow. Approved.

No. 23. WHEREAS: Resident hunters, through organized sportsmen's clubs spend a great amount of time and club money yearly

DR. C. A. MORTIMER
Secretary-Treasurer

in assisting the Game Commission in restocking, and

WHEREAS, an increase in license fee will not keep out the desirable class of non-resident sporesmen,

BE IT RESOLVED: That non-resident Hunter's License fee for big game be $25.00 and small game $15.00; that the non-resident trapping fee be $25.00. Approved.

No. 24. RESOLVED: That the licensee securing a hunting license be required to sign his or her name in space provided for that purpose at the time the license is issued and in the presence of the issuing agent. Approved.

On Resolution No. 25, Resolved that the present law, Section 825, A, B, and C be amended so that the expenses of a jail sentence an revocation of hunting licenses be made discretionary with the court where mitigating circumstances appear. Mr. Banker spoke against the Resolution, and on a vive voice vote the resolution was lost.

No. 26. RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs request the Gome Commission to furnish the services of a Technician in the several offices of the Division Supervisors where at present such skilled services are not furnished. Approved.

No. 27. RESOLVED: That the Game Commission be requested to regulate the Open Dates of the Bear Season so as to include a Saturday for hunting Bear. Approved.

No. 28. RESOLVED: That no change be made in the present Game Law which now permits minor children between twelve and fourteen years of age to hunt when accompanied by a parent or guardian and those between fourteen and sixteen years of age to hunt when accompanied by an adult twenty-one years of age or older. Approved.

No. 29. RESOLVED: That as a further safety measure the Game Commission request the State Motor Police to send additional troopers into the big game counties of the State during the Open Big Game Seasons to assist the local Motor Police to handle traffic congestions and enforcing regu-

(Continued on Page 30)

Sportsmen Join In Big Game Feeding Program

Left to right: Jess W. Spiker, President, McKeesport Sportsmen's Association; Ross L. Leffler, President of the State Game Commission; W. L. "Bill" Munsell, President of the Cameron County Sportsmen's Association, who originated the idea of Deer Feeding Caravans; Charles A. French, Commissioner of Fisheries; Harry Depp, Chairman of the Caravan Committee of Allegheny County. Picture was taken at Emporium, as officials gathered at the Sylvania Dining Room for luncheon, Sunday, January 19.—Photo by C. J. Nichols, McKeesport Daily News.

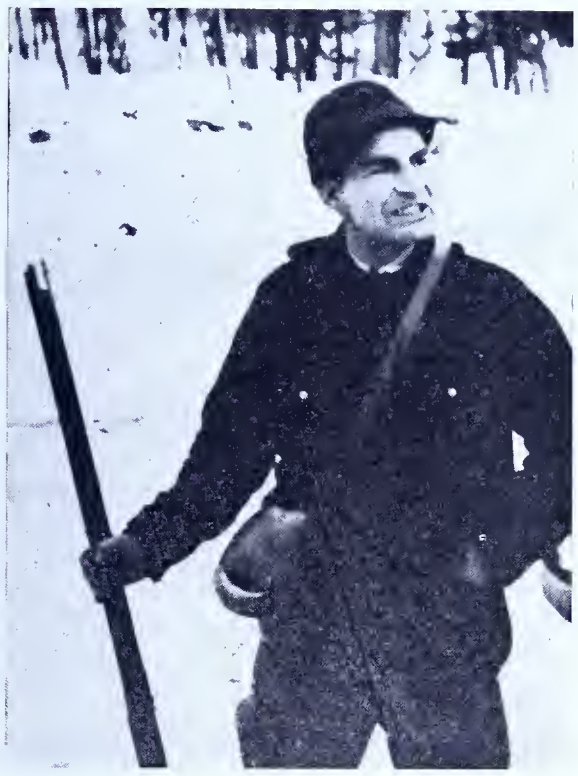
DEER FEEDING CARAVAN

Between eight and nine hundred enthusiastic sportsmen from Allegheny County joined hands with their brothers in the mountainous sections of Forest, Warren, Cameron, McKean and Potter Counties during January in carrying on a gigantic deer feeding program in the northwestern part of the State. The Allegheny Countians formed a large Caravan indeed as they drove overland in buses and private cars to headquarters at DuBois. From there the members were expeditiously assigned to other localities and lost no time in getting under way. The matter of cutting browse for deer and other forest wildlife was carried on under the expert leadership of men who know the forests and there is no doubt that the concerted effort accomplished a great deal even though it was only temporary.

Whenever men band together in the interest of wildlife, travel several hundred miles in the course of a day and bear the brunt of existing cold and inclement weather at the same time, they demonstrate to the world at large that their interest is sincere and their determination dogged.

Space does not permit this magazine to credit personally all those who took part in the venture, nor can we mention all of those leaders under whose management and kindness the Caravan was sponsored. Needless to say, they have all done a splendid piece of work and have demonstrated what can be accomplished under cooperative methods.

WITH THE CLUBS



Dan Koble, Bellefonte, National Muzzle Loader Champion who hunted in Lycoming County last fall.

Ten Springer Spaniels, all of one family and all owned and trained by Ora H. Kale, of Benton Harbor, Mich., recently gave a demonstration to Monroe County sportsmen. In the picture with Mr. Kale, left, and his dogs, are members of the Monroe-Pike Sportsmen's Assn., left to right, Willard Quick, president; Arthur Whittaker, E. W. Siptroth, Maynard Lee and Arthur N. Frantz, county Game Protector. Unlike the trained dog act of the circus, Mr. Kale and his spaniels confine themselves to the work of hunting small game and birds. The ten dogs act with great precision, even to the extent of permitting a bird to be placed in the center of a circle of ten dogs, then, at command, any one of the dogs will retrieve it. Any of them, too, will retrieve a taped live pigeon or other bird without harming it in the least and even retrieve eggs without breaking them.

Louis W. Stevenson, of Wellsboro, was elected president of the Tioga County Consolidated Sportsmen's Association at an annual election and orgainzation session held January 16 at the Penn Wells Hotel, Wellsboro.

Other officers named were: H. Austin, Gaines, first vice president; Joe Borden, Holliday, second vice president; Leon S. Moshier, Wellsboro, secretary and treasurer. President Stevenson was also named as representative of the Tioga County AAA Safety Committee, from the Tioga County Consolidated Sportsmen's Association.

The association decided to hold a Sportsmen's Banquet the latter part of February or early March for which a nationally known speaker will be secured. Films of out-door life will be shown, and members of the State Game and Fish Commissions will be invited to attend. The committee in charge of arrangements is Dr. Harry Howland, Gaines, Leslie Wood and Louis W. Stevenson, both of Wellsboro.

An important legislative step was taken when the association voted for incorporation and a committee consisting of Joe Borden, Mike Dartt and H. Austin was appointed to take immediate action on this question.

Following discussion it was decided that the association should assist member clubs in raising ringneck pheasants by contributing toward the cost of feed for the birds. The possibility of purchasing and maintaining a permanent picnic and outing ground was discussed but no definite action was taken.

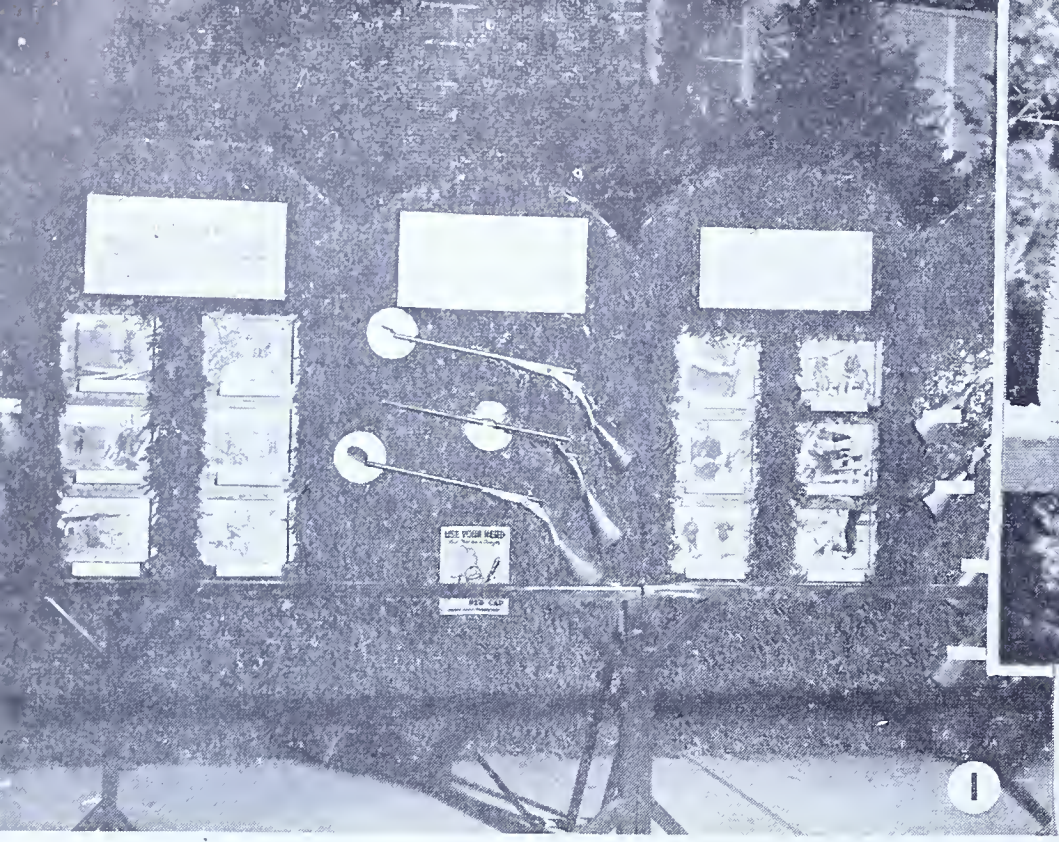
A report on the annual picnic of the association held at Bradley Wales Park, in August, was made by Chairman Louis W. Stevenson and disclosed that the affair netted the association over $350 with some money still to come in.

Photo by R. S. Sullenberger

Left to right at Speaker's table: W. H. Kreitz, Commander Cloister Post American Legion; Seth Gordon, H. R. Stackhouse, C. Allen Wiker, Toastmaster.

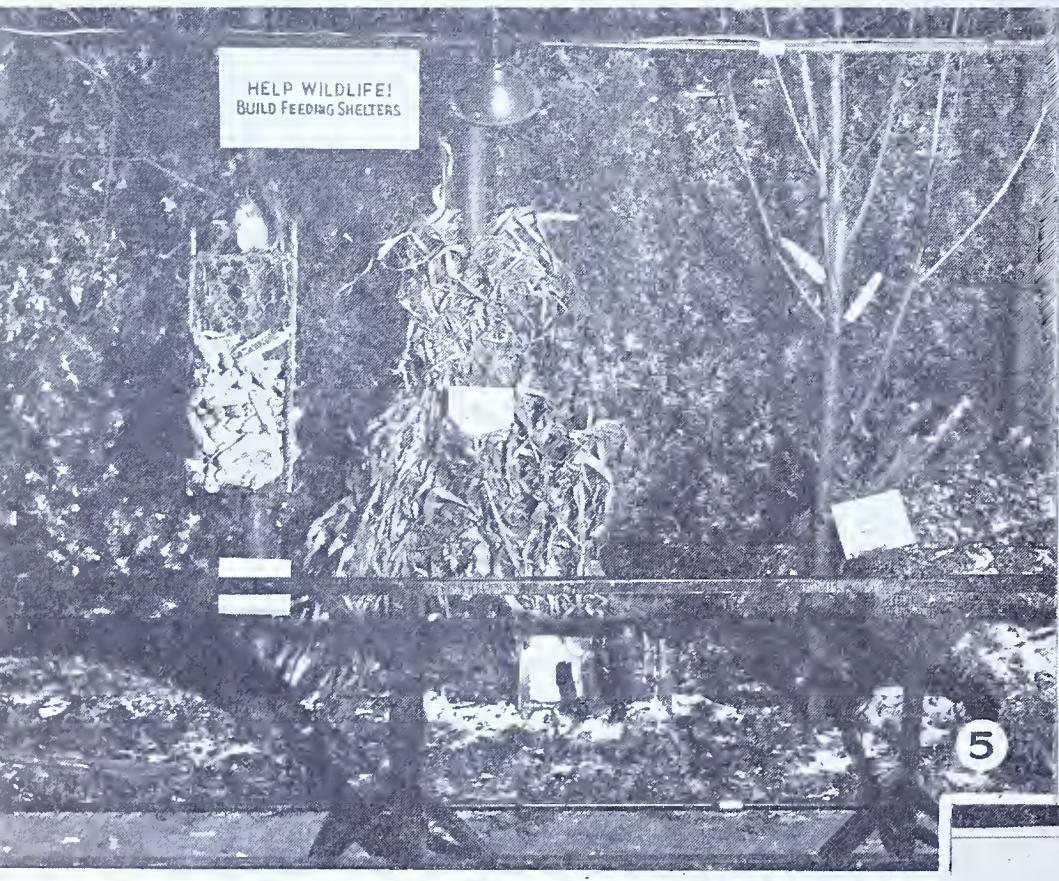
Resolutions in connection with the proposed changes in the fish and game laws were acted upon, and were presented to the Pennsylvania Federation of Sportsmen's Clubs at their annual session in Harrisburg, February 12.

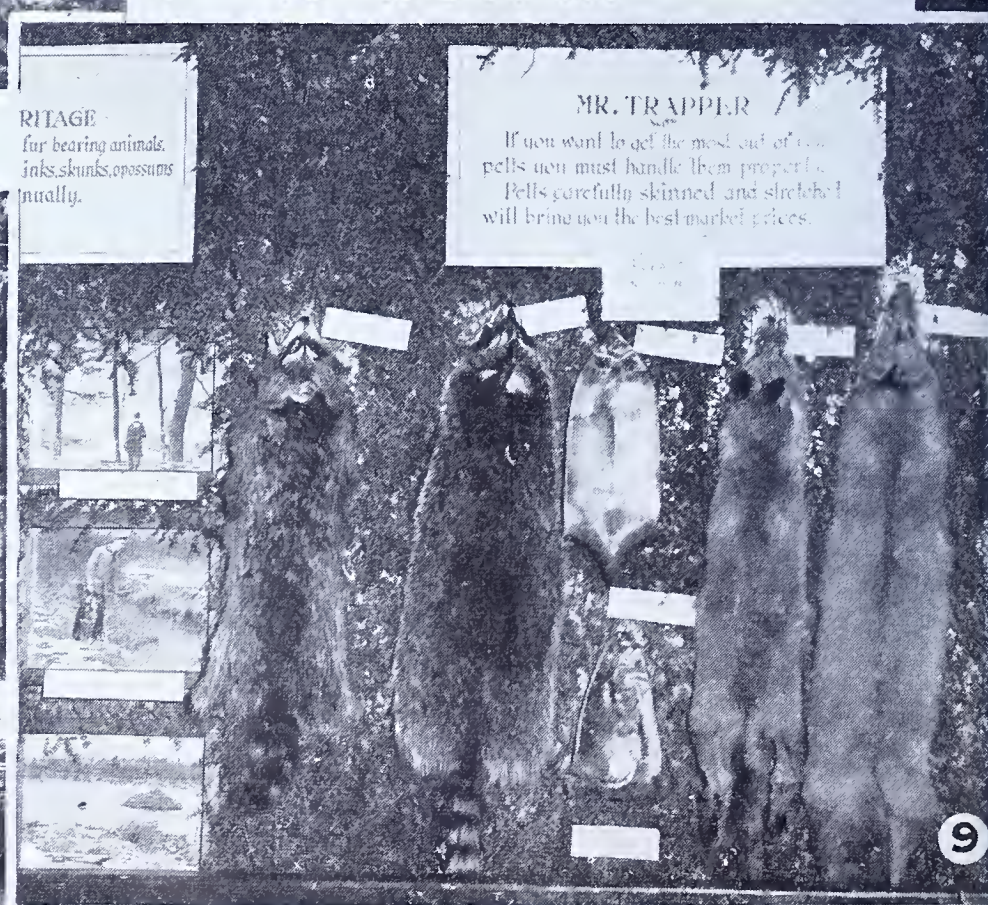
The following committee chairmen for 1941 were appointed by President Stevenson: game management, Joe Borden; fish, Prof. Myron Webster; farmer-sportsmen cooperative, Robert Heyler, Jr.; publicity, Leon B. Cameron; pure stream, Frank Revie stream improvement, H. Austin; program, Lewis Corwin; picnic, Leslie H. Wood; vermin control, Bert Earl; membership, Milan Butler; finance, E. S. Lewis; legal, Robert Cox.

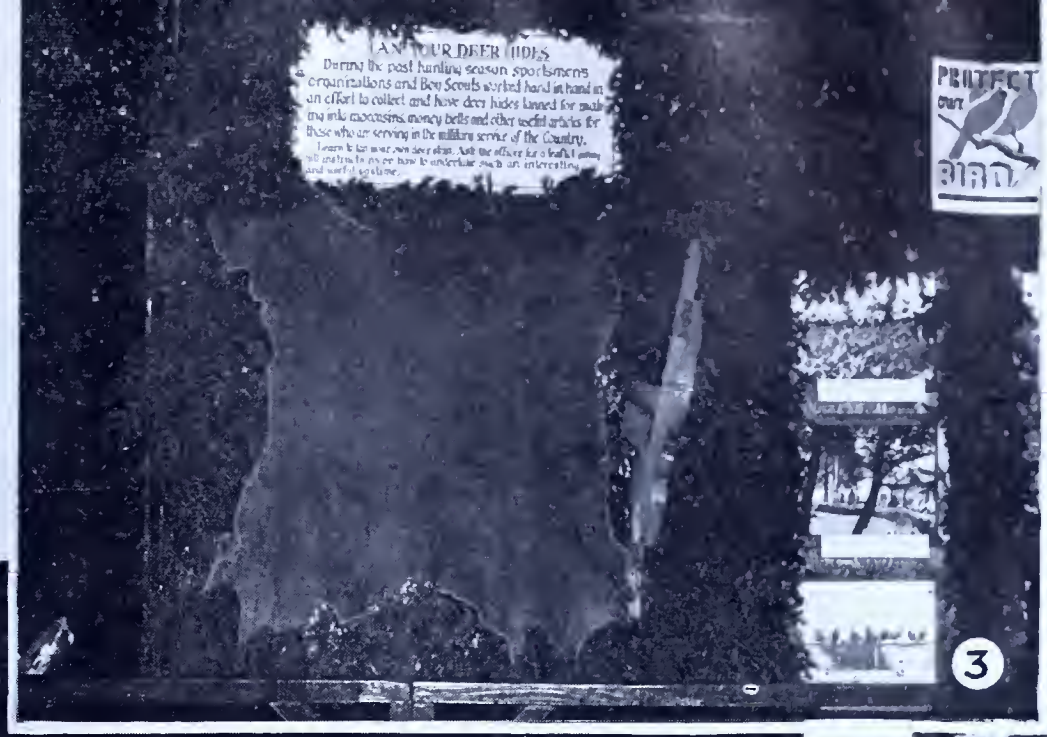


GAME COMMISSION EXHIBIT AT FARM SHOW

1. Display of unsafe firearms. 2. Squirrel at spike-pole feeder. 3. Tanned deer hide display. 4, 5, 7, 8, 12 Winter feeding shelters. 6, 11, Game Protectors in charge of the exhibit were busy every minute of the day handing out literature and answering questions. 9. Display showing proper and improperly handled pelts designed to encourage trappers to take better care of and thus derive the most benefit from their hides. 10. This exhibit shows an upgrown fence row and encourages such growth in order to protect game and song birds. An adjoining exhibit showed a fence row burned of all existing grass and cover.






TAN YOUR DEER HIDES
During the past hunting season sportsmens organizations and Boy Scouts worked hand in hand in an effort to collect and have deer hides tanned for moccasins, money bells and other useful articles for those who are serving in the military service of the Country.
PROTECT OUR BIRD

3

4

6

LEAN-TO SHELTER

7

10

FREE
GAME NEWS

TENT SHELTER

WITH THE CLUBS

Photo courtesy of Oil City Derrick

Organized groups including members of the Oil City Bucktails finally succeeded in wiping out a pack of coyotes which have been at large in Venango County. The animals shown above and below were killed on January 11 by the party shown. Some of them weighed as much as 62 lbs.

A Hunting and Fishing Club was organized among the student body at the Altoona Senior High School during the term beginning September 1939. Approximately four hundred students participated in the program which was sponsored by the school faculty and supervised by Mr. Earl Dickey, a member of the faculty.

A meeting was held each week prior to the small and large game season and instructions and lectures were given in conservation, game life, woodcraft, safety, and good sportsmanship, etc., by members of the faculty, outstanding sportsmen and public officials. I discussed safety measures, proper handling of firearms and the Game Laws. The students displayed a great interest and the group results were the best indications of this.

Each student was required to make a report after each trip or day's hunting. This report described what the student had seen and done, what game was observed, or killed, and what conservation steps had been taken. The students were permitted to be absent from school for four days during the entire hunting season, and at the end of the season each one completed his game-kill report.

Four hundred boys hunted, and there were no truants or other improper absences. Most important of all, however, was the fact that not one hunting accident occurred involving any member of the group. This program was continued along the same lines during 1940, and there were three hundred and fifty members and no accidents. The idea is an ideal way of teaching the boys to learn by doing, and by arousing their interest a generation of real sportsmen is being developed. I may add a similar program will be started in Tyrone schools, sponsored by the Tyrone Sportsmen's Association and the school faculty.—Earl W. Dickey, Altoona Senior High School, Altoona, Pa.

Mr. Earl Dickey, who supervised the club, stated that only one boy was truant and hunted without permission from home or school. He said the total bag of game the boys reported included turkeys 2, rabbits 308, gray squirrel 168, grouse 37, quail 9, ringnecks 13, deer 17, and woodcock 9.

Two sample reports, such as the boys submitted, are appended for other sportsmen's organizations and school educational programs.

Altoona High School Hunters Report

The State Game Commission is interested in our meetings we had for you last fall. Will you answer all questions carefully?

Name: Harry L. Otto, Jr. Age: 19

Total days missed '40-'41 term: 3 to date.

Total days missed for hunting: 2 to date.

Check the following that pertain to you:

I hunted for small game, yes; deer, yes; bear, no.

Give size of big game killed:

Game: Doe deer, size 110 lbs.

List number of each small game killed:

Rabbits	9
Gray Squirrels	2
Grouse	1
Quail	
Ringnecks	

Name any other small game you killed:

....

....

....

....

List any unsportsmanship activities you noted while hunting:

A. One fellow ran on a trail of my buddies deer and wanted it.

B. I saw several fellows arguing about deer.

C. Shooting a little doe, only about 30 or 35 lbs. when on top of it.

D.

List best sportsmanship activities you witnessed while hunting:

A. I noticed a few fellows that were after buck because they say it is more sport than killing doe. That is correct, but I didn't want to miss too much school, that's why I shot a doe.

The Game Commission wants you to answer this one carefully. List ways in which you have helped in conservation of wildlife during the past year:

A. Took a little food into the woods this year.

B.

C.

D.

Over thirty junior members of the Game Club of Wood, Bradford County, Pennsylvania, recently held a rally at which local representatives of the Game and Fish Commissions spoke. This group of boys is extremely active in promoting all local conservation programs under their leader Phillip Rank, Deputy Game Protector.

WITH THE CLUBS

SECOND ANNUAL DINNER OF THE FEDERATED SPORTSMEN OF LANCASTER COUNTY

Approximately 250 sportsmen of Lancaster County defied the recent severe snow storm to attend the second annual banquet of the County Federation of Sportsmen's Clubs held at the American Legion Home, Ephrata, Pa., January 27, 1941.

James N. Norton, Chief of Land Management Division of the Game Commission was the principal speaker. Other speakers included Seth Gordon, Executive Director of the Commission and H. R. Stackhouse, Administrative Secretary of the Board of Fish Commissioners.

A pledge to the flag was commanded by Dr. Evan D. Russell, Commander of the Cloister Post of the Ephrata American Legion, Ephrata, Pennsylvania.

The address of welcome was made by Donald C. Wagner, Ephrata Borough Manager, who explained how democracy and conservation go hand in hand.

New officers for the year were introduced by Mr. Allen Wiker, retiring president of the association. Lyle Simmons, President, Columbia; H. N. Witmyer, Vice-President, Manheim; R. S. Sullenberger, Secretary, Lancaster; J. Arthur Norris, Treasurer, Lancaster.

As a first step in introduction of the study of conservation in the public schools, books on Pennsylvania wildlife and descriptive charts of Pennsylvania fishes have been distributed in the McCaskey High school and the Junior high schools through cooperation of the school authorities with the Lancaster County Sportsmen's association.

The Lancaster County Sportsmen's association has arranged with the West End Rifle Club for use of the club's quarters at 1000 Maple Avenue to train a youth rifle team. John M. Haverstick, county game protector, has agreed to assist in the project, which it was said would be in accord with the defense program and at the same time discourage the careless use of guns by inexperienced persons.

Last fall, in an effort to promote Conservation Education in the State Teachers Colleges and Public Schools, the Conservation Education Committee of the Federation of Sportsmen's Clubs, with the assistance of representatives of the Fish and Game Commissions, spoke at 26 county institute meetings and 3 State Teachers Colleges throughout the State. That this effort bore fruit can be attested to by the subsequent requests for additional services received in the offices of the two Commissions.

The Committee believes that if it had contacted the County Superintendents earlier, it could have covered practically the entire State. They make up their programs so far in advance, however, that this was out of the question. Within a few weeks the Committee shall solicit those Institutes which did not come within the program last year.

Dr. and Mrs. Gail Kahle of Hadley, Pa., at their Vowinckel Lodge called Kahlewood Lodge and Attorney P. A. Kahle of Lima, Ohio, their guest for the deer season 1940. Dr. Kahle is a genuine sportsman and a true friend of wildlife. He shows his friendship to game birds and animals by feeding hundreds of bushels of corn and ground feed each winter on his 750 acre game refuge in Clarion County at Vowinckel.

Two hundred and forty members of the Spring Church Sportsmen's Association attended the Club's second annual supper meeting recently.

Speakers were J. Frank Graff, Judge of Armstrong County, William Ashe, District Attorney and President of the Armstrong County Sportsmen's League, and Herbert G. Gates, Armstrong County Assemblyman. Visitors included Walter H. Miller, County Commissioner and Secretary of the Armstrong County Sportsmen's League, R. H. McKissick, County Game Protector, Carl A. White, Delegate to the Southwestern Division, Carl Benton of the Buffalo Valley Club, R. Clyde King of the Apollo Club, Dr. Joseph A. Picard, Secretary of the Armstrong Hunting and Fishing Club.

The Spring Church club consists of 300 members, holds two Beagle Field Trials each year, sponsors a mush ball team, and has an annual community picnic to which the public is invited any time.

"Sunday, February 2 a hundred members of Buffalo Valley Sportsmen Association went to the woods and fields in Buffalo and Franklin Townships, Armstrong County, built shelters and distributed feed for the game. New organization, only two years old, but has now 600 members on its list."—Game Protector Raymond H. McKissick,: Armstrong Co.

The Evans City Sportsmen's Association held a banquet some time ago that was a banquet. Over 400 enthusiastic sportsmen of that city and vicinity turned out to enjoy a gala feast and to listen to some very fine talks by Fish Commissioner Charles French, and President Ross L. Leffler of the Game Commission.

W. E. Hughes of Oil City did himself proud as toastmaster and following the speaking the members and their wives were treated to some very fine vaudeville performances and to motion pictures of wildlife. Excellent prizes including rifles, shot guns, fishing paraphernalia were awarded but the irony of this event was that the wives, sisters, and sweethearts of the members present held the lucky numbers instead of the husbands, brothers, and bridegrooms to be.

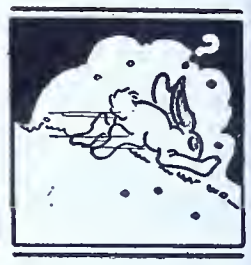
The Littlestown Fish and Game Association now has a membership drive open, and all sportsmen and hunters in that community are asked to affiliate with this organization. The membership fee is $2.00. The club recently made arrangements for a contest wherein those catching the largest fish of the species will receive a prize.

The spring trials of the Sewickley Kennel Club will be held March 29 and 30, 1941, the dogs to work on liberated ringneck pheasants. The judging will be in the capable hands of Don Turrill of Laughlintown, and Solan M. MacRae of Grove City.

The Puppy and Derby Stakes will be run Saturday and the Open All-Age and Members Shooting Dog Stakes, Sunday. Trophies and Rosettes will be awarded all placed dogs. —Edwin Lyon.

L. F. Swanson, Titusville, with large red fox he bagged. Length 43 inches, weight 9¾ pounds.

SPORTSMEN'S QUERIES



By CHAS. F. STAMBAUGH

TRAILING WOUNDED DEER AFTER 5:00 P. M.

Q. In the 1940 deer season I shot at a big deer. There were about 3 inches of snow. I trailed the deer and on the right side of the trail there would be a large drop of blood; on the left side it looked like the blood was sprinkled. I shot at the deer at 3 P. M. and trailed it until 5 P. M. The deer had laid down six times and left big pools of blood. I quit at 5 o'clock and some other person got the deer. Was I right in stopping at 5 P. M.?

C.O.D.—West Fairview, Pa.

A. Under a strict interpretation of the law, you did the proper thing in refraining from trailing the deer after 5 P. M., as that is the limit of time during which one may pursue and kill deer. Considering the seriously wounded condition in which the deer apparently was, it might have been possible for you to continue to trail the deer by getting in touch with the nearest representative of the Game Commission and asking him to accompany you. Should a Game Protector have been convenient to you at the time, we believe you could, when accompanied by him, have continued on the trail of the deer after 5 P. M., and in his presence killed the deer when found mortally wounded. To continue alone to trail this deer after 5 P. M. would have subjected you to a penalty. However, if no Game Protector were within reasonable distance, you may have continued to trail the deer alone after 5 P. M. if you had reliable witnesses, preferably persons not members of your own hunting party, who saw you wound the deer during legal shooting hours.

* * *

NOVEMBER DEER HUNTING

Q. In what year or years did the Pennsylvania deer season come in November 10 to 25?

C.E.R.—Muncy, Pa.

A. In 1913 the deer season in Pennsylvania was November 10 to 25. In that season a hunter was permitted to kill one male deer having horns visible at least 2 inches above the hair.

* * *

SHELL LIMIT ON PUMPGUNS

Q. How many shells are legal in a pumpgun for fox hunting?

A.B.—Baden, Pa.

A. Three. The present law forbids the use of a magazine shotgun to hunt for any bird or animal, other than big game, which contains more than three shells at one time in the magazine and chamber combined.

WHITETAILED DEER NATIVE TO PENNSYLVANIA

Q. Please state in your next issue of the Game News, which deer is native to Pennsylvania. If the mule deer is not native, from which state was it imported?

J.M.L.—Quakertown, Pa.

A. Richard Gerstell, Chief of the Division of Propagation and Research of the Game Commission, says: "The Virginia, or whitetailed, deer is the only type of those animals commonly referred to as deer which were and still are native to this Commonwealth. In years gone by, a limited number of mule deer have been imported from western states and placed in privately owned enclosures in different sections of Pennsylvania. To the best of our knowledge, all such animals have perished soon after their importation, possibly because the climate is too humid for their well-being." I might add that the latest available information shows that the State of California has the most mule deer at the present time.

* * *

DELAWARE RIVER HUNTING

Q. How far over the Delaware River are duck hunters of Pennsylvania and New Jersey allowed to go?

L.A.B.—Roebling, N. J.

A. The boundary line between the States of Pennsylvania and New Jersey is an imaginary line running through the middle or channel of the Delaware River. A hunter who holds a Pennsylvania resident hunter's license is permitted to hunt only on that portion of the River which is entirely within the State of Pennsylvania. He may not cross the middle or channel of the River unless he possesses a hunter's license from the State of New Jersey. Likewise, a resident of your State must not cross the middle or channel of the River for hunting purposes unless he possesses a Pennsylvania nonresident hunter's license.

* * *

SENDING CAMP ROSTERS TO GAME COMMISSION

Q. Is there a law requiring a copy of a big game camp roster to be mailed to the Pennsylvania Game Commission?

P.B.,Jr.—Pittsburgh, Pa.

A. No, not at the present time. The requirement that big game camp rosters be sent to the Game Commission at Harrisburg was in the Game Code of 1937, but was repealed on June 24, 1939.

PISTOL POSSESSION IN OTHER STATES

Q. If one's business carries him from state to state, staying in no one place over two months, will his resident pistol permit allow carrying the weapon? Where must it be renewed while away?

C.W.E.—Meadville, Pa.

A. A pistol permit issued in Pennsylvania is good only within the borders of this Commonwealth. Each state has its individual legal regulations and when a traveler goes into another state, it is his duty to inquire concerning the laws of that state on the possession of pistols or any other matters. Some states have laws regulating the possession of pistols, whereas others have none. We suggest you inquire concerning pistol possession of police authorities in foreign states.

* * *

RIFLE FOR WOODCHUCK HUNTING

Q. I have a Winchester M-94 rifle, 30-30 calibre. Is there a lower power cartridge on the market that can be used for groundhogs? My cartridges are of the big game variety and too high powered for such small game. Or would a shotgun of 12-Gauge be of better service with No. 2 or No. 4 chilled shot?

W.R.F.—Philadelphia, Pa.

A. It is doubtful whether a lower power cartridge than the standard 30-30 could be used successfully in your Winchester M-94 rifle, as this gun is chambered for that particular type of cartridge. Your solution seems to lie in using a lighter rifle. My suggestion would be a 25-20. There are several rifles of this size on the market, and the 25-20 seems to be the most popular firearm for groundhog (woodchuck) hunting. It is not so powerful as the 30-30 and is therefore safer to use in small game country. Most groundhog hunters apparently prefer a light rifle to a shotgun.

* * *

SETTING WIRE BOX TRAPS FOR MUSKRATS

Q. Is it lawful to set a wire box trap for taking muskrats?

I.Mc.—Northumberland, Pa.

A. Yes, so long as such traps are tagged and visited the same as is required of ordinary steel traps. Any trap when not set under water must be placed five or more feet from a hole or den and this, of course, will apply to a wire trap.

WILDLIFE

Then and Now

A free Game News subscription for one year, together with a copy of "Pennsylvania Bird Life," and "Pennsylvania Wildlife," will be given for each interesting, unusual or historical fact pertaining to Pennsylvania or American wildlife accepted for this column. Only boys and girls under 18 are eligible, and each historical contribution must be accompanied by satisfactory proof. Address all items to "Wildlife Then and Now," Pennsylvania Game Commission.

"In the days before the Civil War the white-tailed deer of the prairie would often bound straight up in high grass or brushland just to look around "to see what it could see".

"Today if it reaches a state of mind containing the slightest suspicion of danger near, it will slip silently away. The very last thing it will do is to make such an obvious exposure."—"Hunting the White-tail in Thick Cover" by Col. Chas. A. Ranlett.—Taken from Sports Afield, November 1940 issue.—Jack Murphy (age 13), Coal Center, Penna.

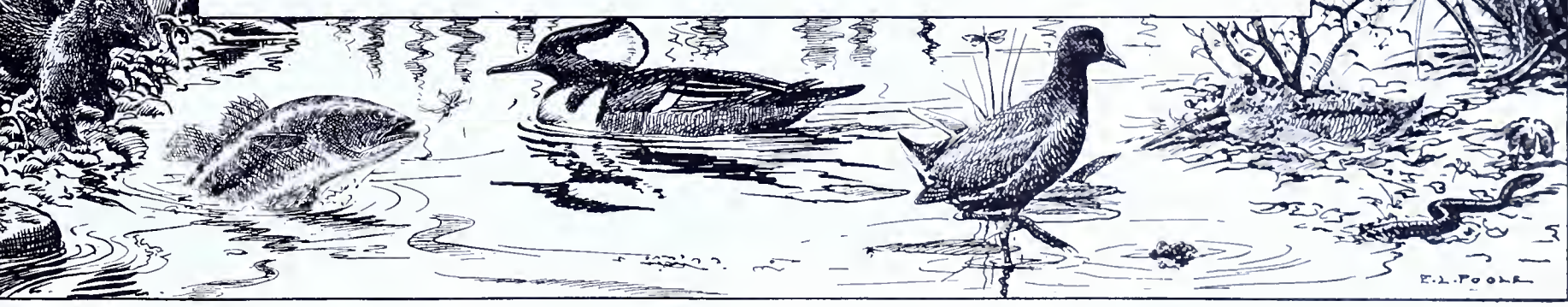
"The young of the Bald Eagle are brown, and hence often mistaken for hawks or Golden Eagles. Only after it is four years old does white appear on the head and tail. Primarily a fish eater and scavenger, there is no justification for shooting this splendid bird". Found in the article in the September, 1940 issue of National Sportsman, page 8, under "Don't Shoot" by Harry Livingston.—Daniel Lichok (age 15), Natrona Heights, Pa.

"In Boy's Life magazine Archibald Rutledge states that at one time he captured several young raccoons. As everyone knows 'coons always wash their food before they eat it, nevertheless, here is an exception to the rule. Mr. Rutledge gave the 'coons some soft cakes that melted away as they proceeded to wash them. They tried several times to wash this type of food but soon gave up the idea. After this experience the raccoons ate the cakes without first washing them. Taken from Boys' Life for September 1938, page 24."—Paul Foreman (age 17), Lititz, Penna.

"Badger means a "dealer in corn". The name was given to this animal because it was supposed to feed on corn. Mole means "earth thrower" and is short for mold warp. Mold means earth, and to warp means throw. Porcupine means "spiny pig". It comes from the Latin porcus, a pig, from which our word pork comes; and spina, spine. Anyone who has seen this animal prick up its spines or quills will understand why it was so named. These three facts came from "Boys' and Girls' Bookshelf" Vol. 20.—Peter Bates (age 16), Philadelphia, Penna.

"Ruffed grouse are credited with being the most clever camouflagers among wild birds of America. Proof: Grit Sports Section, Page 8, in the November 17 issued". Submitted by Joe Springman (age 16), Williamsport, Penna.

"Oddly enough more than one sucker has risen to a dry fly and has been caught. This happens occasionally in the daytime but much more often on warm nights when there is a heavy hatch of large flies on the water. Even experienced fishermen have difficulty in deciding whether the fish they can frequently hear gulping on the surface as it sucks in bugs and flies is a trout or a sucker. We have been fooled ourselves on several occasions. Proof: Hunting and Fishing magazine, July 1940 issue, page 17 under the column "Fishing Facts" by Breems Forrest".—Submitted by Michael Stupi, C.C.C. Co. 301 S-80 (no age given), Masten, Penna.



Members of the Game Commission: Standing left to right include A. W. Lee, Jr., Clearfield; G. I. Phillips, Alexandria; O. Ben Gipple, Harrisburg; Robert Lamberton, Franklin; Seth Gordon, Harrisburg; sitting left to right include John H. Price, Scranton; Ross L. Leffler, McKeesport, President; Samuel C. Castner, Williamsport, Vice-President; and Nicholas Biddle, Jenkintown.

More than 2,000,000 birds were actually counted in the United States during Christmas week according to the National Audubon Society magazine. In the forty-first annual Christmas bird count, sponsored by the magazine, 2,213 observers took part, and listed the birds seen in their localities of every state of the United States except New Mexico, three Canadian Provinces, and Hawaii. The weather over most of the country during the census period was anything but favorable, continues the report. Census after census, in fact three-quarters of them, describes exceedingly adverse conditions for observing birds: dense fog, rain varying from a drizzle to a heavy downpour, snow, and visibility that made identification difficult to impossible. But despite, all this, 327 censuses came in to shatter all records.—National Audubon Society, N. Y.

"One Canada goose at an Oregon wildlife refuge has the habit of following automobiles several miles, keeping up to 54 miles an hour."
—Science News Letter.

Statutory fixed charges on State Game Lands and Game Farms, in lieu of taxes amounted to $31,787.01 for the year 1940. Checks amounting to $6,326.18 were mailed to 58 County Treasurers, $12,764.34 to 306 Treasurers of Boards of Township School Directors and $12,696.49 to 306 Treasurers of Boards of Township Road Supervisors in October.

It is a well known fact that Commonwealth-owned property is not subject to assessment for ordinary taxation, but it does not seem to be common knowledge that in lieu of taxes, both the Department of Forests and Waters and the Game Commission pay an annual fixed charge of 5c per acre to local taxing authorities on State Forests, State Game Lands and State Game Propagation Farms purchased in the respective counties and townships. As a matter of fact the Department of Forests and Waters has been doing so for about 40 years and the Game Commission during the 20 years it has been purchasing lands. Payments are based on 1c per acre for county purposes, and 2c per acre each for township road and school purposes.

By far the most numerous of all offenders during the past hunting season was that of possessing loaded rifles or shot guns in automobiles. Won't our hunters soon learn to observe this safety regulation?

Mr. "Jimmie" Vieard, R.F.D., Philipsburg, Pa., with a fine eight-point buck bagged in Rush Township, Centre County, on the opening day of large game season. Upon tagging his kill he noted that the buck had been hit in the head with shot during small game season and that many pieces had lodged in the ear and the rack as shown below. Having dragged the buck for some distance Mr. Vieard decided upon an easier method of getting his kill home. He soon returned to the scene with a fully harnessed pony, used in his coal mining business, hooked onto the animal and very proudly made his way home with the greatest of ease.

CURRENT TOPICS

FEDERAL AID PROJECT APPROVED

The Fish and Wildlife Service of the United States Department of Interior approved on January 13, 1941, the Game Commission's fourth Pittman-Robertson Federal Aid in Wildlife Restoration Land Acquisition Project. Approval of this project has been pending since August 1940.

The project provides for the purchase of 21 tracts of land totalling 16,050.2 acres, located in 9 counties. Several of the larger tracts involved have already become new and separate blocks of State Game Lands, while certain of the smaller tracts are contiguous and have been grouped to form other new blocks of State Game Lands.

The fact that this project was pending was stated in an article entitled "The Federal Aid in Wildlife Restoration Program" which appeared in the January 1941 issue of the Game News. The program was fully explained in that article and it is to the benefit of sportsmen to read it.

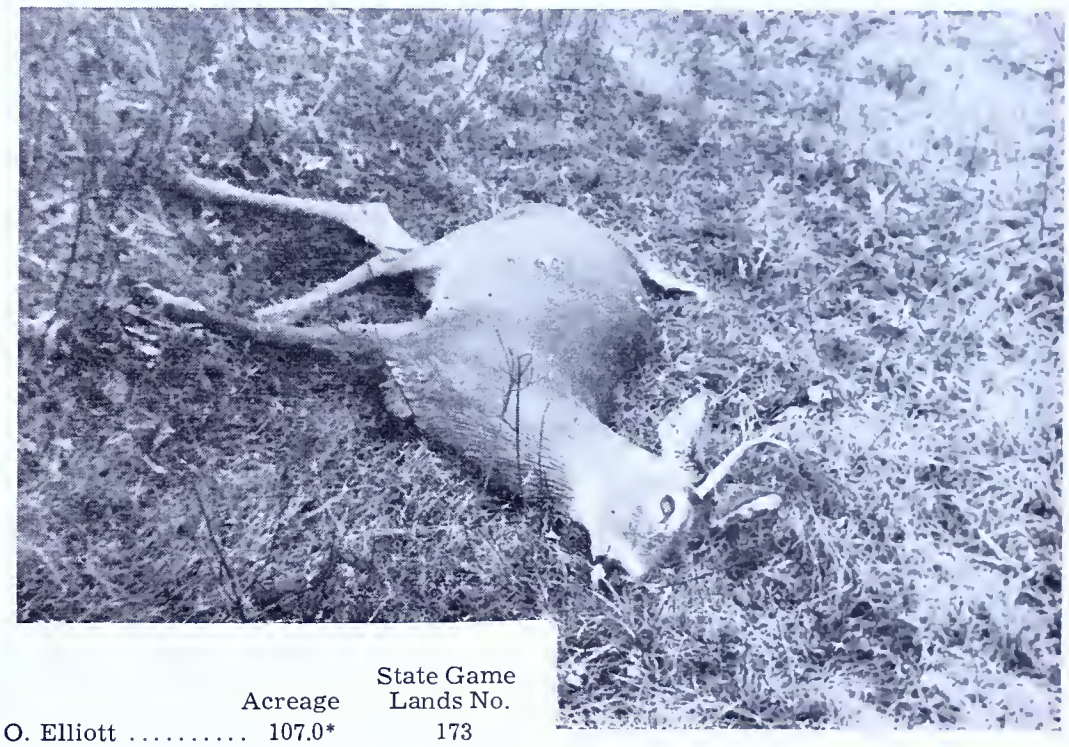
The estimated total cost of the project just approved is $101,876.18 and the Federal Government will reimburse the Game Commission to the extent of 75%. On this basis, the Federal Government's share will be about $76,407.12 and the Game Commission's share about $25,469.04. The total cost includes the purchase price of the various tracts of land, as well as the cost of making boundary line surveys and for examining and abstracting titles.

All of the 21 tracts named in the project were approved for purchase by the Game Commission prior to submission of the project to the Fish and Wildlife Service in August 1940. Since then, boundary line surveys were completed and the titles examined and abstracts prepared for most of the tracts concerned. In fact, title is now vested in the Commonwealth, for use of the Game Commission, for 14 of the 21 tracts.

Following is a statement of tracts included in the project, in the last column of which is indicated the tracts for which title has been secured and the State Game Lands number by which they are now designated:

County	Township	Grantor	Acreage	State Game Lands No.
Beaver,	Ohio	Esther A. & Mary O. Elliott	107.0*	173
Beaver,	Ohio	R. H. Kirk, et al	443.3*	
Centre,	Patton	William A. Strouse	256.5*	176
Centre,	Patton	George B. Goheen, Jr.	210.5*	176
Centre,	Patton	James A. Taylor	326.9*	176
Cambria,	Dean, Clearfield	J. H. Westover	2,350.0†	
Greene,	Jackson	Kenneth Milliken, et al	307.5*	179
Greene,	Jackson	W. V. Hoskinson	304.7*	179
Greene,	Jackson	Laura E. Stockdale	123.7*	179
Greene,	Jackson	William R. Tague	212.9*	179
Greene,	Jackson	Mrs. Nella Bailey	96.2*	179
Lackawanna,	Clifton	John A. Frech Est.	1,669.3*	135
Northumberland,	Jackson, and others	Grand View Coal Co.	2,775.0†	
Pike,	Palmyra, and others	D. D. Medway, et al	2,798.0*	
Pike,	Blooming Grove	Mabel Ely, et al	1,355.6*	180
Pike,	Blooming Grove	R. S. Pierson	50.2*	180
Pike,	Lackawaxen	Guy W. Moore, Receiver	1,088.8*	
Warren,	Watson	Wheeler & Dusenbury	1,112.1*	
York,	Lower Chanceford	Frank M. Burns	117.0*	181
York,	Lower Chanceford	John W. Baker	130.5*	181
York,	Lower Chanceford	W. W. Posey	358.2*	

* Actual acreage determined by survey.
† Estimated acreage. Survey not completed.



"The two above scenes were taken in the Bear Creek region of the Allegheny National Forest, where usually is found a heavy concentration of deer hunters, and very clearly show the result of shooting from hill to hill with poor visibility. The group of empty cartridges were evidence of the hunter's station and by following the bullet marks through the heavy underbrush, a distance of well over 250 yards, we found the subject of the second picture, an illegal spike buck. Although we know there are a few hunters, who are excellent shots, capable of this type of shooting and hitting their target, it should not be attempted unless the hunter is a dead shot equipped with the necessary accessories."—Clair B. Lay and Lewis B. Reddinger, Brockway, Pa.

The Penn-Pitt Hunting and Fishing Club of Greensboro holds its meetings in the local theatre and are always on the lookout for new films that portray hunting, fishing, and good sportsmanship.

CURRENT TOPICS

Photo courtesy of Indiana Gazette

Deer killed by Edward Twig, R. D. No. 2, Indiana, Pa., on December 2, 1940, in the Yellow Creek area of Indiana County. The animal weighed 210 pounds hog dressed and had 29 points.

NOTES FROM THE FIELD

"Areas where release cuttings were done contain rabbits at this time, whereas prior to the cutting and the building of rabbit retreats by WPA no rabbits inhabited these areas."—Game Protector Burt L. Oudette, Crawford County.

Last year George M. Frey, Chambersburg, observed the following dead animals on the Lincoln Highway between that city and McConnellsburg. He averaged around five trips a week between the two points: Rabbits 168; cats 36; dogs 6; skunks 27; opossums 11; squirrels 2; and groundhogs 3.

In his comment on hitchhikers he said that school teachers and students were talkative and interesting. Soldiers and CCC boys reasonably talkative, and women always so. Habitual hitchhikers just excess baggage.

"Saw 12 deer eating apple honey that I had hauled Saturday."—Edwin Carpenter, Game Protector, Sullivan County.

Have noticed many rabbits killed on the highway since the close of the season."—Game Protector Raymond M. Sickles, Crawford County.

"There was a deer killed on the highway near home every night for four nights in a row. Only one of them had done damage to the car."—Clyde W. Decker. Game Protector, Clearfield County.

"We see an average of 20 deer in the yard at the Refuge Headquarters each night before dark feeding on apple pomace."—Game Protector E. W. Carpenter, Sullivan County.

"While patrolling in the High Knob section on Saturday, January 4, I observed the tracks of seven varying hares, 1 weasel, 5 porcupines, 10 grey squirrels, 2 red squirrels, 2 ruffed grouse, and numerous deer tracks." —Game Protector E. J. Turner, Wyoming County.

"The apple pomace that has been put out is being used freely by all wildlife, especially deer."—Game Protector John A. Hopkins, Warren County.

"Except on the refuge area there are very few deer to be seen in the valley. Plenty are left on the high level and they are still quite wild."—Game Protector L. B. Rosenkrans, Elk County.

"I saw a rabbit running out of the brush past one of my feeders, and wondered what disturbed him. I did not have long to wait for in hot pursuit was a weasel. I shot at it with my pistol but missed. However, the weasel gave up the chase and scampered into a hole. I made a bait set and caught the weasel the next day."—Game Protector Raymond M. Sickles, Crawford County.

"Due largely to our improvement cutting work the number of grouse left over for seed stock in this section exceeds any previous year since I have been on the refuge."—Game Protector Elmer L. Piling, Centre and Clearfield Counties.

Numerous Game Protectors report seeing many wild turkeys. This is a good indication that ample seed stock has been left over. Judging from the reports of many officers who are trapping rabbits, indications that there are more of these animals left over than were supposed to be, especially after the discouraging reports received during the season.

"While on duty in the Medix Run section on February 20, I had my car parked at the end of Sullivan Road, where I planned on taking out some feed for a few wild turkeys known to be in that area. During this time, I paused to talk with a native regarding game conditions in the community, and while doing so a ruffed grouse came flying in great haste from the thick brush toward my car. On seeing the car, it attempted to fly under the front, but hit the bumper of the car and then went under the car. The grouse was pursued by a small hawk at a distance of probably five feet. The hawk immediately darted over the top of the car so quickly I was unable to shoot at it. It appeared to be a Cooper's or sharp-shinned hawk. I do not believe it was large enough for a goshawk. The grouse remained under the car for a while and then walked into the brush." —Game Protector Edward L. Shields, Elk County.

WITH THE CLUBS

MONTGOMERY COUNTY FEDERATION

When the Montgomery County Federation of Sportsmen's Clubs held its quarterly meeting January 20 in the Valley Forge Hotel, Norristown, there were present approximately 75 delegates and members from fifteen member clubs. The delegates were guests at this meeting of the Montgomery County Fish, Game and Forestry Association.

Following the report of the Nominating Committee Chairman, George Sinclair of Norristown, the 1940 officers of the Federation were unanimously elected officers for 1941. They are as follows: President, William Stoneback, formerly of Colmar, now of Lansdale, from the Lansdale Sportsmen's Club; First Vice-President, J. Russell Meyers, of Ambler, a member of the Wissahickon Field and Stream Association; Second Vice-President, Howard McFarland, Oaks, from the Upper Providence Fish, Game and Forestry Association; Secretary, Leroy B. Seasholtz, Gilbertsville, of the Douglass Rod and Gun Club; and Treasurer, William H. Ellis, Bridgeport, from the Montgomery County Fish, Game and Forestry Association.

A "Bull Shoot" which is being sponsored by the Boulder Valley Sportsmen's Association for the benefit of this Federation, the Federation will be helped financially and everyone who participates will have a grand time. Tickets for the "Bull Shoot" were distributed to delegates from the member clubs. The shoot was held on Sunday, February 23, at the Meadow View Inn, Sumneytown, on Route 63.

The East Greenville Rod and Gun Protective Association, from East Greenville, was unanimously elected last evening into membership in the Montgomery Federation. The new member club's delegates were present at the meeting to tell the other delegates that their association has an excellent and interesting program planned for its first year of affiliation with the Federation.

Montgomery County Game Protector, Ambrose Gerhart of Souderton, from the Souderton Game, Fish and Forestry Association, reported to the delegates last evening that 660 rabbits were received from the Pennsylvania Game Commission and liberated in Montgomery County during the month of December; also that two new State game propagation areas were set up, one in Upper Frederick Township (114 acres) and one in Skippack Township (60 acres). These are good propagating areas, Ambrose said, and should furnish much game for trapping and liberation on open hunting grounds in Montgomery County. Gerhart also spoke of the Winter Game Trapping Program which commenced December 8, 1940, saying that to date the totals of game trapped on "no hunting" areas for release on open hunting grounds were as follows: 325 rabbits, 115 ringneck pheasants, 14 gray squirrels and 3 raccoon. While trapping this game, the State Game Commission's trappers have also killed much vermin, Ambrose further told the delegates. He concluded his report by requesting that the various clubs encourage killing of vermin (hawks, crows, weasels, etc.). He also urged sportsmen to restrain dogs and cats from killing game and beneficial bird life.

A report was read from Ira J. Mills, of Doylestown, Supervisor of the Federation's Bantam and Game Bird propagation, as well as Supervisor of Agricultural Education in the Eastern State Penitentiary, Graterford. Mills' report stated that there are 227 pheasants on hand in the Federation's rearing pens at the Penitentiary, where each year inmates of the prison, under his guidance, raise pheasants and quail provided by the Pennsylvania Game Commission to be distributed, when raised, among the member clubs of the Federation for liberation on open hunting grounds throughout Montgomery County. The pheasants remaining in the Penitentiary pens represent one-half of the total number received from the Game Commission and raised last year. The remainder of the pheasants so received and raised were distributed during 1940 to the Federation's member clubs.

Deer killed by L. F. Manning, right, and his son Buster, left. Mr. Manning's trophy was identified by several of the old timers as one the Commission turned loose. It was killed in Tioga County. Game Protector Blair Davis was called upon and he too identified it as being one, as near as he could tell due to ear markings, coloring, etc., the Commission had stocked. The animal's teeth were worn down to the gums and he was the — in Mr. Manning's opinion — "the oldest looking old devil you could imagine". He was long and rangy, with feet of enormous size. It weighed only 122 pounds in its emaciated condition.

Bucks-Montgomery Counties Fish Warden, Harry Z. Cole of Norristown, a member of the Montgomery County Fish, Game and Forestry Association and Chairman of the Federation's Fish Committee, told those present that the Pennsylvania Fish Commission and the Montgomery County Federation of Sportsmen's Clubs are sponsoring an N. Y. A. project for the purpose of cutting "slips" from willow trees, to be distributed to sportsmen's clubs in Bucks and Montgomery Counties for planting along the banks of streams in the interest of Stream Improvement. Harry also told the group that "papers have been signed to authorize the building of three new dams on Branch Creek". This project is being sponsored by the Pennsylvania Fish Commission and the Montgomery County Federation of Sportsmen's Clubs; while the actual work is to be done by the N. Y. A. under Cole's supervision.

E. F. Browse of Norristown, who is also a member of the Montgomery County Fish, Game and Forestry Association, as well as Chairman of the Federation's Forestry Committee, told those present that approximately 22,000 healthy young trees which have been grown under his guidance in the Federation's nurseries at the Eastern State Penitentiary, Graterford, will be ready for distribution this spring to member clubs of the Federation for planting in their districts.

Chaff from threshing gathered by Game Protector Burt Oudette, in charge of the Pymatuning Waterfowl Sanctuary, and used for feeding waterfowl at the refuge.

CURRENT TOPICS

The nest in the left hand corner of the above photograph contained 13 duck and ringneck pheasant eggs. It was located along the little Lehigh river last summer by Mr. Kiefer who subsequently snapped it.

The 1941 New England Game Conference will be held April 4 and 5 in Boston. Again as last year Friday, April 4 will be a day of discussion on technical subjects including management of both water and land animals. Saturday will be devoted to topics of general conservation.

The mimeograph copies of the papers given last year are now available by writing to the Massachusetts Fish and Game Association, 20 Spruce Street, Boston. Thirty-three papers are included. The price is again 25 cents for the group, which is just enough to cover the cost of the papers, ink, and mailing.

NOTES FROM THE FIELD

"During my trip through the woods I have observed deer appeared to be just as numerous now as they were before the hunting season."—Game Protector John A. Hopkins, Warren County.

"A fox that was nearly white was killed recently by Glenn Hebberly of Howard, R.F.D. It was not purely albinistic, however, because it lacked the pink eyes. From the size of the feet and body build I'd say it was a grey fox."—Game Protector Joseph W. Kistner, Centre County.

"Many foxes, rabbits, grouse, deer, and even a few turkey tracks observed on Game Lands 106 and 110. I saw no weasel tracks, however."—Game Protector Herbert A. Diehl, Berks County.

Three little opossums all in one tree. Photo snapped in daylight by Game Protector Raymond M. Sickles.

"I have had a chance to talk with quite a few of the hunters since the close of the season and they all seem well pleased with the number of deer left over for next year."—Game Protector Edward Shaw, Forest County.

"Judging from the number of hunters who got separated from their parties and could not find their way out of the woods, it points out only too clearly why it pays to make a thorough study of the topography of the area in which you are going to hunt."

"On December 19, approximately 70 deer were observed by men and Game Protector E. W. Turley in the vicinity of the refuge on Game Lands 34."—Game Protector Herbert E. Kauffman, Centre County.

'Have had two deer damage complaints since the close of the season."—Game Protector Hugh E. Baker, Tioga County.

"Mr. H. W. Harris of Scranton, Pa., killed his 1st deer during the past season. It was the 7th he bagged since his 75th birthday."—Game Protector Hugh E. Baker, Tioga County.

"I saw a number of buck deer that were killed the latter part of the season that had lost their antlers. I also talked to a hunter who told me he saw a covey of 19 grouse in the Possum Brook section. He said they had holes in the snow and seemed to be eating from the ferns and other greens underneath."—Game Protector E. J. Turner, Wyoming County.

"A hunter shot a doe in McHenry Township that had a fully developed fawn it it."—Game Protector Chester Siegel, Lycoming County.

"I observed a doe with antlers in the velvet during the past season. One antler was a spike and the other a two-point."—Game Protector Raymond Sickles, Crawford County.

"While coming to work one morning one of the men on project work in Huntingdon County saw two rabbits sitting along the road, seemingly sick or hurt. On going to them he found that they had been hit by a car. He was able to pick both up, but one died a few minutes later. The other one was taken home and nursed back to good condition. This rabbit now is comparatively tame and has cultivated a taste for milk and bread. If apple parings are placed before it along with bread and milk, it will always eat the bread and milk and not touch the apples."—Ross G. Metz, Land Management Protector, Huntingdon County.

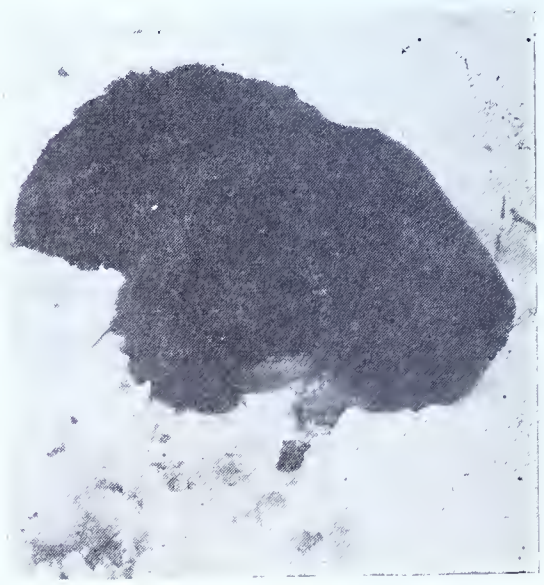


Photo by Robert Latimer

Snopshot of 200 pound bear killed illegally by a deer hunter on December 2, 1940, near Slab Run Swamp, Sullivan County. As you can see the animal was shot while in the open. It's hoped the guilty party will realize what an unsportsmanlike thing it was to do.

CURRENT TOPICS

A very good friend of the Game Commission is anxious to complete his set of annual reports. His set is complete except for the 1901, 1907, 1908, and 1910 reports. If any reader has these old reports please drop the editor a note advising prices which you will be willing to part with them.

A number of readers are trying to bring their GAME NEWS file up to date with back copies previous to 1937. If any readers have any early additions that they would like to dispose of please tell the editor what issues they are and what price you want for them.

Game Protector John Hopkins of Warren County found two lost boys during the past hunting season, both sons of Robert J. Jones of Erie. In his letter of appreciation to Protector Hopkins, Mr. Jones included the following poem:

Two boys hied to the mountain to see
If they could locate a deer maybe.
The going was rough, the hills were steep,
As they plodded on in the snow so deep.

Came dusk and the darkened hills looked grim;
Our hunters thought they'd better come in.
So they turned to the left, and turned to the right,
Trying to find the old campsite.

The wildcats are near, you'd better watch out
And not step on the tail of a catamount.
Then they fired their guns waiting to hear
An answer from someone they hoped to be near.

Faintly they heard in the distance that night
An answering shot and a welcoming light.
They climbed in a flivver tired and cold,
Glad to be carried back to the fold.

So the moral is this: if you want to stray far,
Make sure of the place where you've left the old car,
Stay near to the trail, keep out of the rough,
Then maybe the next time, it won't be so tough.

There were some wonderful sportsmen in this section during the past season. On the first day of the deer season at Refuge 24 they used the posts the refuge wire was fastened to and the wooden signboards for fire wood. Altogether several hundred feet of wire was down and about 12 posts apparently were used to make fires—Game Protector Edward Shaw, Forest County.

"Last week the section men found a deer with one leg caught in a tree where she had been feeding. The leg was broken and had to be taken off. One of the men, Ward Casbeer, took her home and she is doing fine."—Game Protector E. E. Hunsinger, Potter County.

Some say blacksnakes are harmless. They may be to humans but not to game. On the 21st of last August, on one of my trips through the woods, I shot a large blacksnake. Opening it I found two half-grown rabbits and a dove. A few days later I killed another one with a rabbit and a few quail inside. We have the largest blacksnakes in this community I believe that are in the United States.—M. U. McFelly, Deputy Game Protector, Heilwood, Pa.

"Over 25 deer were killed in the Pymatuning area. Some unusually fine bucks. The largest head had 14 points, and the spread measured 32 inches. It was killed a half mile south of the refuge by Pete Trotsky, Parktown, R.D., with a shot gun. All the Refuge Lake is frozen over, and we have 65 Canadian geese, 5 swans, and 135 ducks that will be on the ration list all winter."—Game Protector Burt Oudette, Crawford County.

The North Dakota State Game and Fish Department plans to make a survey of the wildlife resources of the State.

Judging from the reports of Field Officers apparently very few spike bucks were killed during the past season.

"There was an unusually large deer kill in this section, about 40% being legal bucks."—Game Protector Roland Turley, Bedford County.

"On January 22, Mr. Lane and I were feeding game along the top of Sideling Hill Mountain, in Northern Taylor Township about four miles from any farm building, when we found a small hog lost in the mountain; it was coaxed up with some of the game food and we caught it, and put it in my car. Later we located the owner and returned the hog to him. He said it was one of a litter of nine, and that the rest of them had been sold, and that no doubt this one had wandered in the woods trying to locate its mates and became lost. It had been in the woods for several days and was very weak from exposure as the ground was covered with snow and sleet."—Isaac Baumgardner, Game Protector, Fulton County.

A TRAGEDY OF THE WILD
Either one of the above animals was killed by a locomotive, and then the other was killed while attempting to feed upon the victim.

A SAGA OF THE WILD

Continued from Page 11

turn up a mile away on a trail across the valley barking as if they had a deer at bay. However, we did find many spots where deer had been bayed for some time, apparently by two dogs, one with a small track such as a beagle or terrier might make. The other track was undoubtedly made by a huge, heavy dog that sank deep into the packed snow and made a track as if the fist of a large man had been impressed in the snow, with definite claw marks where he surged forward. This certainly wasn't any ordinary dog.

During the day it became more apparent to us why so many deer were being pulled down. At the head of the valley the snow was quite deep and with such a crust that we wished for our snowshoes to keep us from breaking through every few steps. Driven by dogs across the snow the deer broke through at every leap until their leaps became a trot and their trot a walk and then the dogs, because they were lighter, and their large feet supported them on top of the crust, would quickly close in for the pitiful finish. We found several spots with such signs written as plainly as the letters on a Braille reader.

All that day we hunted the dogs, hearing them often but never sighting them once. We tried every trick that we knew to get them within range of one of the guns, but always unsuccessfully.

Many of the local fellows were out by now determined to help get the big killer that was so fast depleting their deer supply. One of them had walked onto the dogs early in the forenoon as they were in the act of killing a nice buck. Unfortunately he had no gun. His was the first description we had of the beast. He described him as big black, ugly looking, long haired animal probably of German Police stock. The dog traveling with him was a small, brown and white beagle. Just as Titus had said, this man was very definite in his statement that he had no desire to meet the big fellow at night if he was alone.

The third day's hunt was attended with no success other than to acquaint us somewhat better with the itinerary of the dogs. We left the valley at dark, tired and discouraged, but pledged to return on the following day. We did return early the next day and once more established headquarters at the camp. All that day we hunted the dogs, hearing them often but never sighting them once. About the middle of the afternoon, we came upon the remains of a deer carcass, or should I say the remains of a deer's head and hide. In the middle of a large clearing almost within sight of our headquarters the dogs had brought to bay and killed this deer so quietly that we had not known what was going on; we must have been at the fire when it happened as the remainder was still warm and we had only left it a short time before.

Here was a new angle to the game. The dogs were apparently running and killing quietly, at least part of the time. The thing that actually awed us as we stood there looking at the remains was the fact that even the bones of the deer had been crushed in powerful jaws and devoured. All that remained

Photo by W. E. Oldham

Seven deer found by Mr. Oldham and his son Clifford, all killed by dogs within a quarter mile of their rural home in Cambria County. He said the deer would seek water invariably when pursued. In order to avoid the dogs they would wade the stream a long distance, then emerge and back track. In most cases the dogs were wise enough to keep on the banks of the streams and watch for the deer.

was part of the head, some skin, a short portion of the backbone and the hooves. These parts were picked clean of flesh. The reader will say that other animals carried the bones away and cleansed the flesh off; that no dog could do so. But we carefully searched the vicinity and only the tracks of the two dogs were found. Parts of the remains were still flexible and warm, the blood on the snow still bright red and soft. Only one conclusion; two dogs had quickly killed and consumed a small deer. One dog, small, and capable of eating only a few pounds of meat at the most. The remainder of the deer must have been eaten by the other dog. With such a gorge in him we reasoned he would go somewhere and lie down for the night, and that grim reminder of his work served to fan into flame once more our desire to get his scalp.

It was growing late in the afternoon, so we returned to our lean-to and fire to thaw out. A stiff breeze was driving sharp sleet before it, and we were dejected but still quite determined. I stood with my back to the fire and Titus was placing some partially burned fagots on the flames. It appeared as if we were destined for another day of failure. Suddenly we both perked up like a pair of fox hounds at the sound of a distant pack. We had, as one, heard what we had been continually listening for for several days, but which we had not expected any more that day. A mile up the valley and coming our way we could hear the occasional yapping of the small dog as we had learned to know it. Perhaps he was having some sport by himself. Titus grabbed up his shot gun, I my rifle, and we set off across the flats a distance of a half mile where we each seemed to know instinctively the chase would cross. Better to get the little one than nothing, I reasoned as I ran.

Titus, due to his elongated six feet four and eagerness to get the dogs, led the dash sinking in to his knees through the crust every few steps. As we approached the creek, I, watching the distant cleared spaces where the chase was expected to cross, saw five deer of assorted sizes pushing across the opening. From the distance one could see they were about spent. Lagging out in single file and crunching through the crust with their sharp hooves they seemed to wobble in their stride. From my right and not far behind the weary deer a more sinister form appeared. Not the little dog as I had half expected, but the big killer just as I expected to find him bounding along on the deer track with all the grace of a puma. He was shortening the distance between himself and the deer with amazing speed, reminding one of a great black panther. At the distance, he appeared immense. Certainly we were in no danger yet, when I thought of the deer a tingle ran up my spine until the hair on the back of my neck stood up like on an electrified cat. I shouted to Titus to draw his attention to the sight. He stopped for a second, then sped forward to cut off the pursuit.

As he approached the creek I noted he seemed unmindful of it, and sure enough in attempting to hurdle it he tripped and went in head first. Up came my friend on the opposite side, undaunted, spouting water and only stopping to empty his gun barrel. This struck me as mighty funny and I was forced to laugh as I ran. All this while I had unconsciously kept the dog in range of view and now perceived that only about a hundred yards separated him from the cover of the woods where he would be lost to view, and perhaps lost to us forever. I shouted to Titus to lie down and hastened his compliance with a shot over his head at the dog. My first and second shots caused the dog to slow up and then stop. Upon my third shot he turned as if confused and started along the back track. Trembling as I was from exertion I took as careful aim as possible and pressed the trigger.

The biggest German Police dog that either of us had ever seen dropped in his tracks and lay still. We went over to the beast and found that the shot had pierced his heart. Thinking that the other dog might come along on the trail we waited for some time to no avail. My friend and I put a rope around the ex-killer's neck and dragged him and several of his victims to the car. When we pulled out of Lockes' Valley that night we ended one of the toughest dog hunts that either of us ever took part in, and we felt that we had ended a real menace not only to deer but to any livestock that might of fallen in the creature's way.

When complete inventory was taken we ascertained that we had actually found fourteen deer that the dogs had killed. Almost all the doe we opened were found to be carrying two fawns. Added to this actual count, the deer never found, we estimated in the neighborhood of forty dead deer these dogs were responsible for.

On the neck of the big killer was a leather collar on which was a license tag for 1939. You may be interested to know that within a few days the owner paid a fine as a partial retribution for the evil work of his dog which had been allowed to run at large.

THE MARCH OF CONSERVATION

Continued from Page 9

velopment of better methods of utilizing and disposing of waste products.

Canned Fishing Products

In 1937, the production of canned fishery products in the United States and Alaska amounted to 742,197,065 pounds, valued at $105,174,935; the output of by-products was valued at $36,804,045; the production of frozen fishery products, excluding packaged products, amounted to 103,111,549 pounds, estimated to be valued at $8,800,000 and fresh and frozen packaged fish and shellfish, 201,-802,529 pounds, valued at $27,677,899. It is estimated that about 686,000,000 pounds of fresh fishery products (excluding packaged fish and shellfish) valued at about $57,000,000 were marketed during 1937.

The Fur-Seal Industry

In 1911 an agreement was entered into by the United States, Great Britain, Japan, and Russia, whereby the taking of fur-seals in the North Pacific was prohibited, except under certain limited conditions by Aborigines dwelling along the coast of North America.

As a result of this treaty and the scientific management by the U. S. Government of sealing operations on the Pribilof Islands, the only place where the animals come ashore, the Alaska fur-seal herd has increased from approximately 125,000 animals in 1911 to more than 1,800,000 in 1938, and now contains approximately three-fourths of all fur-seals in the world.

Photo by U. S Bureau of Fisheries

The Alaska fur-sale herd has increased from approxmiately 125,000 animals in 1911 to more than 1,800,000 in 1938.

The maintenance and protection of fur-seals at the Pribilof Islands is one of the functions of the Bureau of Fisheries. Killings are confined in so far as possible to surplus males of the three-year old class. About 55,000 fur-seal pelts are taken each year by the Bureau and the herd continues to increase at the rate of about 9 percent annually.

FOX HUNTING NOTES

« « « By W. NEWBOLD ELY, M.F.H.

I told of some of these delightful English affairs in "Country Life and the Sportsman" after a visit a few years ago, and several other incidents from my "Country Life" and "Sportsman" pen the recounting of which has been requested are abbreviated with the kind permission of these publications and my good friends, Pete Vischer and Dick Danielson.

Before the black shadow of any stuka darkened the English landscape an interesting pageant was enacted by the green hedgerows of those perfect Midlands. This time it was in the golden sunshine of a Gloucestershire afternoon when those truly and delightfully English institutions — the Gloucestershire Rural Community Council and the Gloucestershire Playing Fields Association— re-enacted the arrival of the immortal Mr. Jorrocks at Hanley Cross. The leading part, that of the illustrious M.F.H., Mr. J., was taken by Tom Newman, who received a splendid presentation from the Dukes followers upon his resignation from twenty odd years as the Beaufort huntsman at Badminton. "Mr. Jorrock's Hounds" were the Cotswold, (This is a different pack from the North Cotswold imported last spring for the duration of the war by Simp Dean, M.F.H. of Vicmead and Mason Houghland, M.F.H. of Harpeth Hills.) loaned for the occasion, and as the FIELD described it "Mr. Jorrocks (as was so often his wont) dismounted at a jump, pushed it down, and lead his unprotesting steed through." It was felt that this must have gone against the grain of the stouthearted Tom to whom no fence has ever been too big. *** We bipeds are frightfully conscious of our hearts. "So-and-so has a bad heart" is the cause given for many cases of biped unsoundness, yet in animals these organs are so rarely mentioned that one gets the feeling that heart trouble is with them some unmentionable social disease. As a matter of fact, heartworm in dogs is blasting its way northward with the result that whole packs of hounds are being destroyed, hunters are passing out on top of their owners, race horses like "Sonny" Whitney's Flying Cross are falling dead of heart failure while exercising, chasers are galloping like blazes for say a mile and then stopping. All these facts give much support to the theory of such able trainers as Morris Dixon that the physical defect in such horses is their heart. Yet when we buy a horse we have the vet go over its legs, its teeth, its wind—but how about its heart? To remedy this situation the Veterinary Hospital of the University of Pennsylvania has a portable electric cardiograph, which makes examinations "in the field." The workings of this machine were recently pictured in "Life"

BOOK REVIEWS

"A Field Key to Our Common Birds", by Irene T. Rorimer. This clever little pocket size booklet attempts to put into the hands of the bird observer a simple formula for identifying common birds in the field. Only pertinent facts have been given. The most significant of these are habitats, size, color, calls or any other peculiar or outstanding habit or characteristic. It is illustrated with black and white line drawings and color plates. Published by the Cleveland Museum of Natural History. Price $1.50.

"We set six small ringneck traps on a propagating area in Derry Township, Montour County. On a visit to one of these traps we found two live ringneck hens and a Cooper's hawk in the trap. The ringnecks seemed none the worse for being in captivity with the hawk."—Game Protector Bruce P. Yeager, Northumberland and Montour Counties.

NINTH ANNUAL FEDERATION MEETING

Continued from Page 13

lations on all State owned roads or highways. Approved.

No. 30. WHEREAS, under ruling G-20-A and G-22-A, the Secretary of Agriculture has been given the power to fix seasons on resident game within the States on Federal Land, and

WREREAS, The exercising of this power in several States has brought direct conflict with existing State Regulations,

THEREFORE, BE IT RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs favor the immediate recindment of Rulings G-20-A and G-22-A, and the Secretary be empowered to make this known to the proper authorities. Approved.

No. 31. WHEREAS, the doves native to and summering in Pennsylvania receive no protection from our closed season, and

WHEREAS, neighboring states in the line of dove migration allow hunting this specie,

BE IT RESOLVED: That this Association go on record as favoring an open hunting season on Doves from September 1 to October 15th in Pennsylvania. Approved.

Motion was made to reject this Resolution, and on the question a discussion was entered into by Bell, Reed, Angst, Ackerman, and Condo. On a motion by Mr. Bell to amend this resolution to have the season come in the same as the woodcock season, the resolution was adopted.

Resolution No. 32 was discussed by Mr. Henderson, Mr. Rowe, Mr. Condo, Mr. Skinner, Dr. Boyer. Mr. Henedrson moved to table the resolution and the motion was lost. On a vive voice vote on the resolution, it was rejected.

No. 33. RESOLVED: That we favor a limit of six inches in height for all deadfalls. Approved.

No. 34. RESOLVED: That the Game Commission report upon the amount of acreage burned in experimentation in controlled burning. Approved.

No. 35. RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs extend a vote of confidence to the Special Predator Fact Finding Commission. Approved.

No. 36. RESOLVED: That the frog law be amended so that the season will open on July 1. Approved.

No. 37. RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs oppose legislation authorizing or requiring the Game Commission to pay deer damage to motor vehicles or crops. Approved.

No. 38. RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs emphatically express to the Governor of the Commonwealth of Pennsylvania, its sincere salutations and confidence in his appointments to the Fish Commission and Game Commission. Approved.

RESOLVED: That the Secretary of the Pennsylvania Federation of Sportsmen's Clubs address a letter to each Senator of the Senate of the Commonwealth of Pennsylvania expressing the confidence of the Federation and soliciting the confirmation of the Governor's appointments to the Fish Commission and Game Commission. Approved.

No. 39. WHEREAS, It has been noted that with the construction of new roads along and across streams, the Highway Department has failed to take precautionary measures to prevent soil erosion; and

WHEREAS, soil erosion is generally detrimental to the stream and its aquatic life; therefore, be it

RESOLVED: That we request the Department of Highways to plant the stream banks that they destroy, with soil binding vines or shrubs, or riprap them with stone. Approved.

No. 40. BE IT HEREBY RESOLVED: That the existing statutes governing the possession and use of firearms by private citizens, are adequate,

THEREFORE: That we are opposed to compulsory registration of firearms owned and used by private citizens for sporting purposes, whether by state or federal statute. Approved.

Mr. Baker gave quite a talk to have the convention approve this Resolution, which it did.

Mr. Dreishbach moved at this time to reaffirm Resolution No. 49 adopted at the February 12th meeting of 1940, to increase the fishing license by 50c to be earmarked in a separate fund for the acquisition of the improvement and maintenance of public fishing waters. Mr. Bell, Mr. Nehf and Mr. Shilling spoke on the question. Objections were raised as to the reaffirming of this Resolution that it was not of order, and President Youngman held that this Resolution could be reaffirmed. An appeal was taken from the ruling of the chair, and on a vote by delegates the chair was upheld 34-27, which reaffirmed Resolution 49 from last year.

No. 41. WHEREAS, when things go wrong and decisions are not satisfactory to the hunter or fisherman, and

WHEREAS, The Sportsman is generally given the credit for the unsatisfactory rules and laws, and

WHEREAS, when depredations and violence occur on the landowners ground or along his stream, the sportsmen is responsible and lands are posted to hunting and fishing, therefore,

BE IT RESOLVED: That the Game and Fish Commissions include on the reports, from the Field Officers, of Law Violations, the following questions:

1. Are you a member of a sportsmen's club?
2. Name the Club. (If a member).

This information (not the name of the violator) to be available so that sportsmen may be given a different classification. Approved.

No. 42. RESOLVED: That the State Federation use its influence to have the State Department of Education include in the Curriculum of the Secondary Schools a course in Conservation Education. Approved.

No. 43. BE IT RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs believes that unsightly billboards and temporary roadside structures tend to destroy the public's enjoyment in our vast highway investment and to menace safe travel on the highways. It therefore endorses the Program of the Pennsylvania Roadside Council for the correction of these evils and recommends that suitable zoning legislation be enacted to protect our rural highways. Approved.

No. 44. BE IT RESOLVED: That the Pennsylvania Federation of Sportsmen's Clubs recommend to all Reforestration Projects a greater proportion of hardwood trees and nut trees, as against evergreens, in order to create more wildlife food supply. Approved.

No. 45. RESOLVED: Any legislation which will free both the Fish and Game Commissions from any and all political yoke. Approved.

No. 46. RESOLVED: That the taxidermist fee for the five years succeeding the passing of the examination shall be $10.00 a year. Approved.

No. 47. RESOLVED: That we introduce a bill to amend the dog law as follows:

Amend Section 19 to secure better enforcement by putting the responsibility of killing unlicensed dogs running at large upon the Secretary of Agriculture and not on local police officers as at present.

Amend Section 26 to include the payment from the dog license fund for the Pasteur Treatment of any resident of Pennsylvania who has been bitten by a rabid dog or has been so exposed as to make medical treatment necessary; and to include the payment for the loss of any domestic animal bitten by a rabid dog, in addition to livestock and poultry as at present.

Amend Section 13 to allow dogs to be brought into the State for a period of thirty days for hunting purposes as well as for show, trial or breeding purposes without a license. Approved.

No. 48. RESOLVED: That the Federation request the Game Commission to continue with the Wild Turkey Propagating Program. Approved.

No. 49. BE IT RESOLVED: That the Fish Wardens be given their just increment in salary and be eligible for the Pension Fund of State employees. Approved.

No. 50. RESOLVED: That the Department of Forests and Waters appropriation cease to be cut and instead be increased to take care of the vast increase of duties. Approved.

At the conclusion of the conference officers were elected for the current year. The office of the president was unanimously bestowed upon Merrill G. Merrits of Altoona, former vice-president; Arch C. Hanes of St. Marys was elected to the first vice-presidency, and Dr. Darlington Kulp of Reading to the second vice-presidency; Dr. C. A. Mortimer of Honesdale reelected secretary-treasurer. John H. Youngman, the retiring president, was accorded a vote of thanks for the fine service he rendered during his term of office.

PHOTO-STORY TESTIMONY TO JOHN M. PHILLIPS

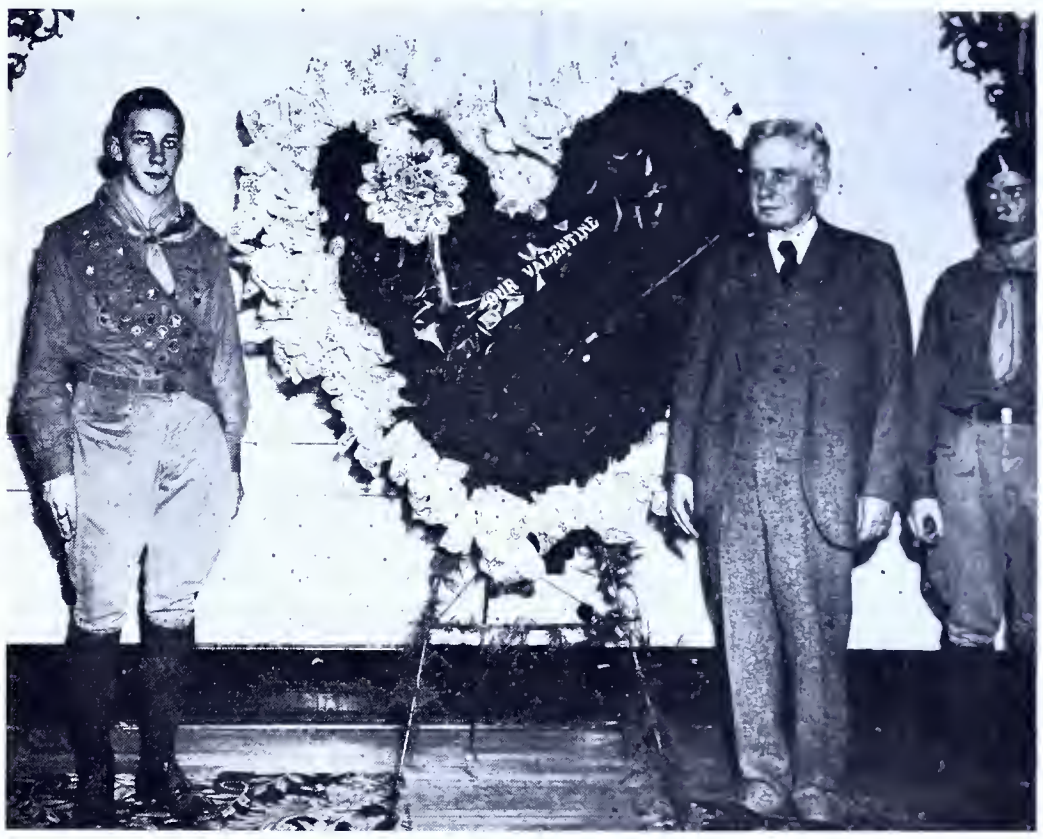
(Continued from Page 1)

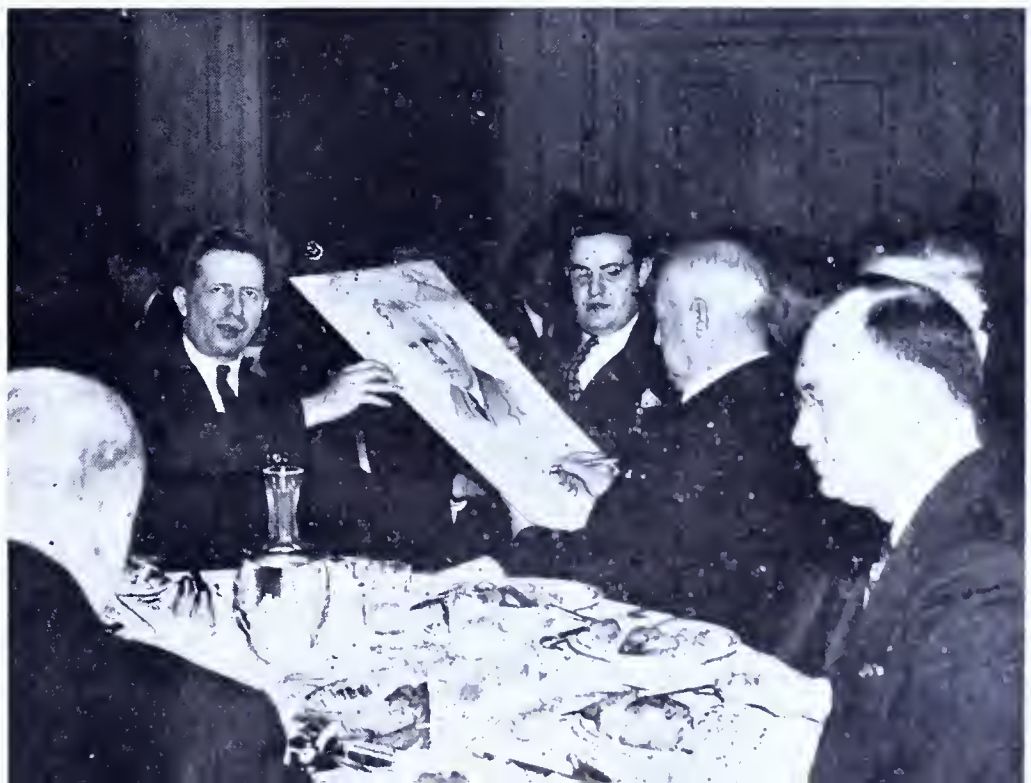
Photos 1 and 2 by Pittsburgh Press

John M. Phillips and Frederick C. Walcott, former U. S. Senator from Connecticut, President of the American Wildlife Institute.

Photo 3 by Sun Telegraph

Guests signing the portrait presented to Mr. Phillips; the portrait carried the signatures of the 500 guests.





CONSOLIDATED SPORTSMEN OF CUMBERLAND COUNTY ELECT

Clyde Miller, of Shippensburg, was elected as the new president of the Cumberland County Consolidated Sportsmen at the annual reorganization meeting held in Carlisle on March 5. Miller succeeds John Altland, of Carlisle, as president. The new officer is active in the Shippensburg Sportsmen's association.

Ralph Wetzel, of Mechanicsburg, was reelected as secretary of the County organization, which coordinates activities of the four sportsmen's organizations of Cumberland County. The delegates from each unit comprise the voting membership of the County organization, which has already proved its value in formulating plans which enable the various organizations to combine efforts in improving conditions favorable to anglers and nimrods of the entire County.

Delegates from the various units who constitute the present membership are: President Miller and Herbert Beckenbaugh of the Shippensburg Sportsmen's association; Dr. C. W. Richter and Clark Dayton of the Big Spring Fish and Game association at Newville; Ellwood Straub and Ralph Wetzel of the Mechanicsburg Sportsmen's Protective association; John Altland, retiring president, Herman Morris and Prof. C. W. Fink of the Carlisle Fish and Game association; J. M. Jones and John Martin of the West Shore Sportsmen's association formed by merging the groups at Enola and New Cumberland.

The meetings of the County group are held quarterly, unless some pertinent legislation or other matter of interest to sportsmen prompts special meetings in order to get concerted action through the monthly meetings of the individual associations. The next meeting of the County group will be held on April 11, at Shippensburg, scheduled to coincide with the meeting of the Shippensburg association and at that time the new president will take over.

Consolidation of efforts of all organized sportsmen in Cumberland County has already proven its benefits in the increased attention given the game refuge projects, stream improvements, and general conservation movements, applicable throughout the entire County.—A. H. Imhof, Carlisle.

Under the sponsorship of the Mothers' Club of Garrick, Allegheny County, 900 pounds of feed for game and song birds was distributed by the school children of that section. Mrs. Phillip B. Benz who is conservation chairman of the club advises that a bird house building contest has also been arranged in 31 schools and that a judging will be made on March 27th.

This 263 pound deer was killed by Mr. Streever of Ballston Spa. near Harrisburg, New York, in 1907.

A regional study of the public recreational facilities and needs of the eight central southeastern States has been started by the National Park Service in collaboration with State officials and other Federal agencies. The study will embrace the Tennessee and Cumberland river watersheds and the surrounding area affected by them. States cooperating by providing data and personnel are Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

Wildlife Week has been set for April 14, 1941, and the Commission urges every sportsmen's organization in the State to lay plans to make it a greater event than it has been in past years.

Birds of Western Pennsylvania—By W. E. Clyde Todd: At last has appeared an outstanding contribution to Pennsylvania Ornithology—The Birds of Western Pennsylvania—one of the finest bird books that has ever been produced. Its 700 pages contain colorful accounts of more than 300 species and subspecies of great variety that occur in this region of mountains, plateaus, valleys, rivers, and lakes. One hundred and eighteen species are illustrated in full color from paintings by the well known and nationally distinguished bird artist, Dr. George Miksch Sutton of Cornell University. Dr. Sutton, a Pennsylvanian, was formerly in charge of the educational work of the Pennsylvania Game Commission; therefore he will, no doubt, be well known to many of our readers. Published by the University of Pittsburgh Press; price $5.00.

Flash of white tail
Among the thorns,
Uplifted head,
Glittering horns.

Rifles' loud crack,
Bucks' headlong rush,
Waving white tail,
Lost in the brush.

Young sapling stands
Ruined at the top—
Got in the way,
Bullet did stop.

Back at the camp
All he would say,
"Dandy big buck
I missed today."

—Albert G. Shimmel.

When H. Douglas Brown, Jr., of Oil City, Deputy Game Protector, was assigned to the task of rescuing a deer that had fallen on the ice and could not get up, he probably viewed the job with certain misgivings. However, he and a companion, Ralph Blauser, proceeded to the scene and found the animal out in the middle of the river near an island. Tying a long rope to each other they crept out on the ice and safely reaching the island made their way to the deer, an eighth of a mile above. It was a fair sized buck but could not rise. After tying him the men retraced their steps to the shore whence they untied the animal which jumped clear. However, it made no effort to leave so Mr. Brown tried to shoo it away. Instead of showing its gratitude by responding, the buck turned on its rescuer, charged him, bit him in the knees, then reared up and struck him in the chest with both front feet. From then on Mr. Brown was contented to leave the animal alone and it subsequently ambled off.

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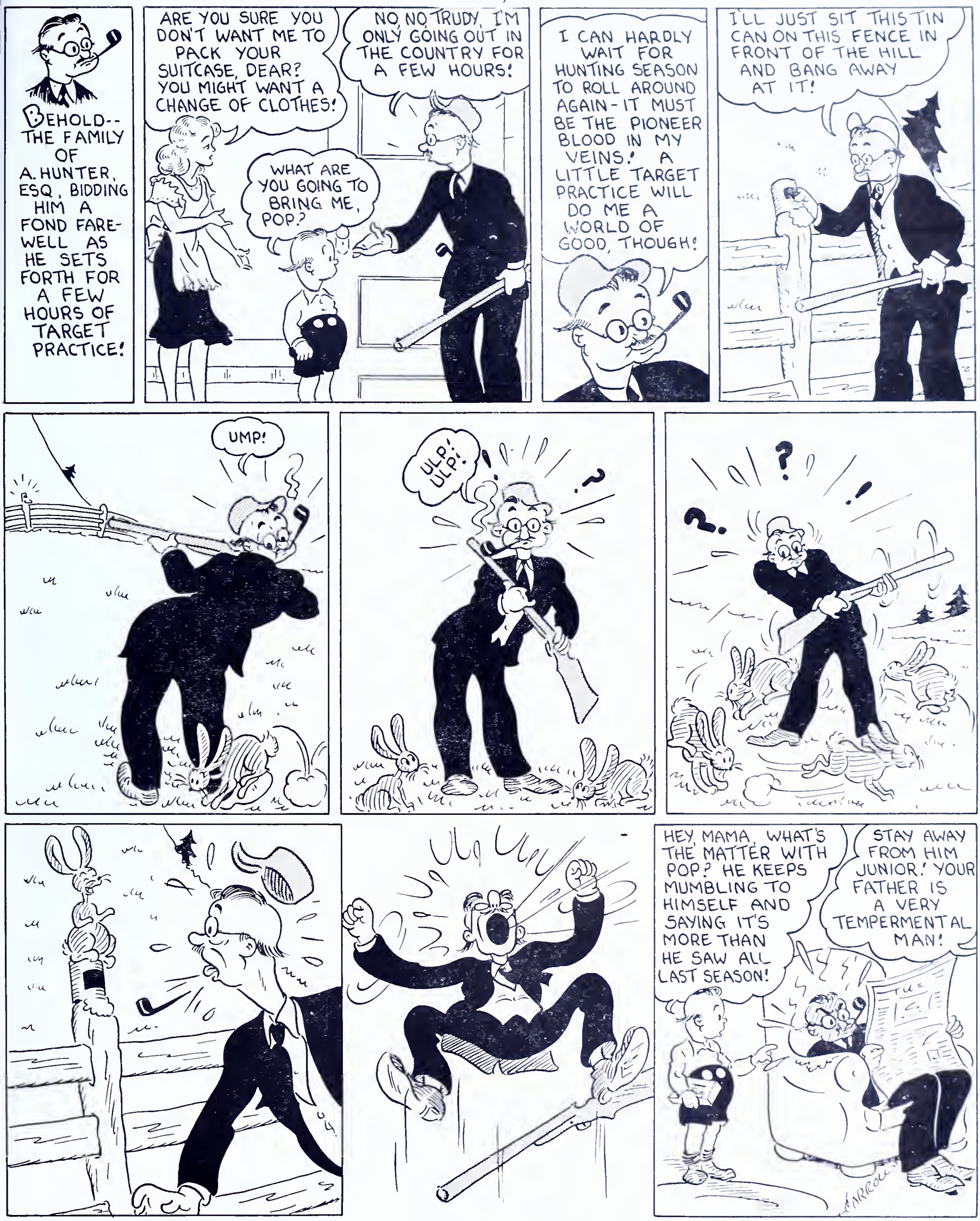

Mr. Farmer

BURNING BRUSH ALONG FENCE ROWS DESTROYS FOOD AND COVER FOR WILDLIFE

Plant your fence rows to food-bearing trees, shrubs and berry bushes and

ENCOURAGE WILDLIFE